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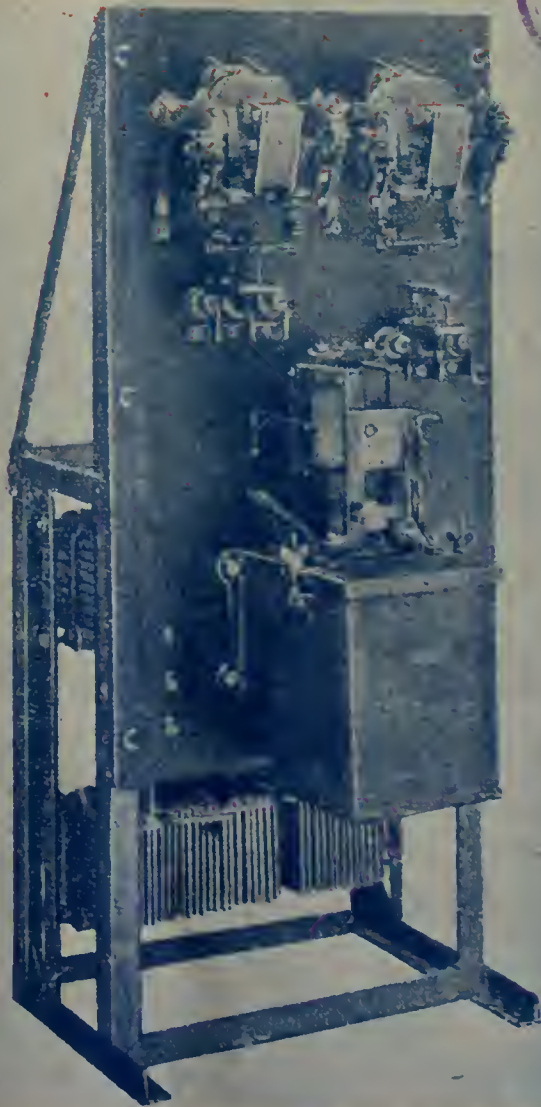
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# Mining Journal

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South African Mines, Commerce and Industries.

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## Notes and News.

Elsewhere in this issue will be found the prospectus of the New State Areas, to which extended reference was made in these columns last week. Applications for the 150,000 shares now offered at par to the South African public may be made direct or through any branch of the African Banking Corporation, Ltd.

\* \* \* \*

The local secretary of the Consolidated Mines Selection Co., Ltd., writes: "We are in receipt of a cablegram from our London office to the effect that the Board of Directors of this company recommend that the dividend for the year ended 31st December last be at the rate of 30 per cent., less English income tax, and that £20,000 be placed to reserve. This dividend is payable to all shareholders registered on the South African register on the 21st February last, and will be distributed on the date of the annual general meeting, which date will be published as soon as possible."

\* \* \* \*

A report has been issued by the Southern Rhodesia Geological Survey, on the Geology and Mineral Deposits of the Umtali Gold Belt, and under the heading of sulphide ores, it says: "No central treatment plants exist at present for the roasting of mispickel and the smelting of galena, with the main object of recovering the base metals, and at present these ores or their concentrates are not sent to the Union for treatment, although there are chances that under the present reduced transport charges this procedure might be adopted. The only other alternative, namely, shipping concentrates for treatment abroad, has been tried, but was found unprofitable at the time. These facts constitute severe restrictions upon the activities of small workers and prospectors as is evidenced by the fact that only a few of the known lead deposits have had any prospecting or development work done on them; and there is but small incentive to prospect for others."

\* \* \* \*

Reuter is officially informed by the Controller of Imports and Exports that copper, lead and tin mines may enter the pool formed by the Transvaal Chamber of Mines for the purpose of importing from the United Kingdom and conserving the necessary mining supplies. Particulars may be obtained from the Director of Central Buying Department, Box 4047, Johannesburg. When the pool was formed in July last it was confined to the gold mines, the collieries and the Premier mine, leaving out the base metal mines. That was apparently a workable arrangement at the time, the base metal mines buying from local stocks and getting the further supplies required by priority certificates from the Government Mining Engineer. After a few months' experience, however, this system proved impracticable, and the base metal mines were continually applying to the director of the pool for permission to come in. They found that although they had placed orders for such things as wire rope they could not get them in time, and local stocks were soon exhausted. Finally the Government cable Home to find if the Imperial authorities had any objection to the base metal mines entering the pool, and a reply had been received welcoming their inclusion. The mines mentioned were commencing to suffer considerably owing to the shortage of supplies, but their immediate requirements have now been attended to by the pool.

\* \* \* \*

The report of the directors of the Wolluter Gold Mines, Ltd., for the quarter ending 31st January, 1918, shows that the development work done was as follows: Total footage, 1,667 feet; total footage sampled on reef, 1,323 feet. The total reef disclosures were as follows: Main Reef, 454 ft., width 24·7 ins., assay value 8·9 dwts.; Main Reef



Leader, 253 ft., width 13.7 ins., assay value 25.4 dwts.; South Reef, 573 ft., width 41.8 ins., assay value 9.3 dwts.; Pyritie Quartzite, 43 ft., width 48.4 ins., assay value, 1.7 dwts. The abnormal rainfall during the last three months has seriously interfered with mining operations and the hoisting of ore, as baling has been necessary intermittently to assist the pumps. Since the very heavy rain on the 14th and 15th ultimo, the water is only just being held, while the quantity of ore which can be hoisted is very seriously affected in consequence. In addition, hoisting was suspended at the west shaft for five days at the end of January while important repairs to the winding engine were being executed. These repairs were completed by the 4th ultimo, and the hoist is again at work. The native labour position is more promising at present than for some time past, an increase of about 100 being shown at the end of last quarter. The twentieth ordinary general meeting of shareholders will be held in the Board Room, The Corner House, Johannesburg, on Wednesday, 27th March, 1918, at 11 a.m.

\* \* \* \*

The following is a summary of the operations of this company for the quarter ended 31st January, 1918. The development footage accomplished during the quarter amounted to 1,204 feet, the footage sampled being as follows:—Main Reef: Footage sampled, 395; reef width, 44 inches; reef value, 6.75 dwts. South Reef: Footage sampled, 455; reef width, 37 inches; reef value, 9.55 dwts. Tons milled, 290,100. Working profit (including sundry revenue), £9,015, less, however, £3,628 appropriated during the quarter in respect of expenditure due to war, contributions to miners' phthisis compensation fund, additions and renewals fund, Government tax, special war levy, etc. Mining operations have been considerably interfered with lately owing to the abnormally heavy and continuous rains, otherwise better results might have been achieved.

\* \* \* \*

Presiding at the annual meeting of the Welgedacht Exploration, reported in another part of this issue, Mr. L. R. Davies said that the output of coal had improved during the year by over 23,500 tons, and that although expenses had risen he thought that the satisfactory results obtained bore testimony to the efficient and economical working of the property by their engineer, mine manager and staff. While war conditions prevail no improvement can be looked for in working expenditure, but on the other hand, as was pointed out, that there was a marked improvement in revenue. The appropriation account showed a disposable balance of £9,500, and out of this the directors propose to pay a dividend of 9d. per share on the 31st inst., as compared with 6d. per share for the two previous years, and to carry forward £3,622. During the current year it is confidently expected that equally good results will be obtained. For the first six months the profits have exceeded £4,000, and the output of coal for four months only has totalled 60,167 tons, while during the same period nearly 53 million gallons of water had been pumped, under contract with the Rand Water Board. Owing to floods, there was a large diminution in the coal output for November and December and operations have had to be temporarily restricted. At the close of the war, it is anticipated that considerable attention will be given to properties in the Far Eastern Rand, where the Welgedacht is situated, and in this fact alone the shareholders may consider that they have an asset of great potential value.

\* \* \* \*

In the Senate this week Senator Marais asked the Minister of Education (1) whether the Government had effected any improvements in (a) the conditions, (b) the salaries, (c) the manner of promotions to higher appointments of young South African engineers holding South African engineers' diplomas in the various Government departments; (2) whether the English degree of A.M.I.C.E. was still required as a qualification for the Government service, and whether the South African engineers' diploma was adequate for the admission and promotion of young South African engineers to the

permanent staff of the said departments; (3) did not the Government regard it as a highly necessary policy for the development of Government technical departments to appoint South African engineers who had taken their diplomas in this country in preference to importing engineers from overseas; and (4) should it appear that no engineers were available in this country holding diplomas from Cape-town or Johannesburg and possessing the required experience or knowledge for certain positions in the Government service, would the Government enable South African engineers to acquire the necessary qualifications in order that the services of those educated in this country might be secured for such appointments. The Minister of Education replied: (1) (a) (b) and (c) The Government after investigation had under consideration a scheme for the improvement of the conditions, the salaries and the promotion of young South African engineers. 2) The A.M.I.C.E. was not an essential qualification for the Government service; the civil engineer diplomas of both the South African College and the South African School of Mines and Technology were accepted qualifications under the Public Service Regulations. (3) Yes. (4) Yes, the Government would use its best endeavours.

\* \* \* \*

A London contemporary very pertinently writes: "It is a pity that the Treasury has apparently not yet been approached for permission to deal on the London Stock Exchange in the shares and options of the Modderfontein East, Ltd. (This is incorrect—permission was asked and refused.—Ed., S.A.M.J.), for meantime the position is needlessly complicated and the recent numerous purchasers of Cloverfields and Rand Klips will in many cases be left with awkward proportions of scrip in the amalgamated concern when the liquidation and distribution of the two former concerns' assets takes place. For the convenience of readers, now that interest in Eastern Rand descriptions is again pronounced, it may be well to recall that for each six Cloverfield shares holders will get two fully-paid Modder East shares and option certificates, giving the call of one additional share for three years at 21s. 3d., and of yet another for four years at 22s. 6d. Each holder of sixteen Rand Klips will get six fully-paid Modder Easts and an option on three more at 21s. 3d. for three years and an additional three at 22s. 6d. for four years. With Cloverfields and Rand Klips standing at present at 12s. 6d. and 13s. 6d. respectively the market is evidently going on the idea that Modder Easts are worth about 30s., or much the same as New Daggafonteins."

\* \* \* \*

The financial position of the Bwana M'Kubwa Copper Mining Co., Ltd., at June 30, 1917, was: **Bwana M'Kubwa Copper.** Cash and War Loan at cost, £53,551; debtors, £7,069; estimated value of concentrates on hand unrealised, £8,000—£68,620, and less creditors and bills payable, £5,167—£63,453. During the year the right to peg 6,000 acres of land has been exercised, making the total land rights held approximately 43,800 acres. There has been no change otherwise as regards the properties, concessions and rights in Northern Rhodesia belonging to the company. During the year the mining and concentrating of high grade ore has been continued; also such development work as was necessary in that connection. The total development footage accomplished was 2,941. The ore tonnage treated was 18,548. The concentrates produced were 1,758 tons, which added to the stock of 89 tons on hand at close of the previous year, makes a total of 1,847 tons. Of these 1,380 tons were shipped and realised, leaving 467 tons on hand at June 30 last, of which 292 have been sent to the works of the Falcon Mines, in Rhodesia, for smelting there and realisation through that company, by way of experiment. Final returns have not yet been received to enable a comparison to be made of the results of disposing of the concentrates as compared with shipping them to England. The balance of 175 tons has since been shipped. From June 30 last till end of November a further 561 tons of concentrates have been produced. Shortage of native labour at the mine and difficulties in connection with repairs of crushing and grinding machinery have prevented the plant being run to anything like its full capacity during the past year.



## TOPICS OF THE WEEK.

### MINING QUESTIONS IN THE UNION PARLIAMENT.

SEVERAL important mining questions continue to occupy the attention of the Union Parliament. Tropical native labour, the low-grade mines, and the Far East Rand mining leases have been discussed and will be further discussed in the near future before finality is achieved in regard to any of them. On Saturday last the community was startled to read the following communication from Reuter's Capetown correspondent: In the House of Assembly, in reply to a question by Mr. Jagger, Mr. Speaker read the first report of the Select Committee on Public Accounts as follows: "Your Committee, having examined the supplementary lease entered into between the Government and the Government Gold Mining Areas (Modderfontein) Consolidated, Ltd., and having taken evidence thereon, begs to report that it is of opinion that the said agreement should not be sanctioned, and that it is very desirable that the Government should take measures to maintain efficient and close inspection of the operations of this mine." The consideration of the report was held over until March 13. This recommendation has yet to be submitted to Parliament, accompanied by the usual explanation from the Chairman of the Select Committee on Public Accounts, and followed by a statement of the views of the Government. Until the matter is thus dealt with, and the question adequately ventilated in Parliament it must be regarded as still *sub judice*. Comment had better be withheld for the present, therefore, regarding the extraordinary purport of the Public Accounts Committee's recommendation, and this, we have no doubt, is also the attitude which the State Mines people will, in the meanwhile, take up. The implied reflections on the good faith of the company concerned are so serious that something more than this curt recommendation of the Committee in question may be awaited before further action is taken or protest offered. It is noteworthy, in this connection, that Sir Edgar Walton complains that where the Government is the partner in the assets of a gold or diamond mine, it has no representation on the directorate boards. "The public," says Sir Edgar, "has a right to look to Parliament to protect it to the extent of giving it as full information as the people have who are in control of the mines." In making this plaintive request Sir Edgar Walton reveals how little interest he takes in the mines, since he seems wholly unaware of the exhaustive programme of publicity nowadays followed by all the mining companies. The Select Committee on the low-grade mines pursues its course in secret tranquillity, and appears to be accumulating an enormous body of evidence from every available source. It is to be hoped that the Committee will soon take the public into its confidence and relieve the anxiety regarding the fate of the low-grade mines now felt by the whole community directly dependent on the industry. In regard to one of the questions being considered by that Committee, viz., the question of importing native labour from north of latitude 22° South, Colonel Creswell has already precipitated a discussion, and drawn from General Botha an interesting statement. General Botha, in the course of his speech, stated that the Government had decided not to approve of the application of the Chamber for the introduction of 2,000 tropical natives, but to sanction an experiment on the following conditions: (a) Number not to exceed 1,000; (b) not to be recruited in areas where sleeping sickness is prevalent; (c) the natives to be immunised with Dr. Lister's prophylactic by the South African Institute for Medical Research; (d) the natives to be concentrated on the Crown Mines and monthly reports to be submitted to the Government by the S.A. Institute for Medical Research; (e) such special provisions to be made in regard to the housing and feeding of these natives as might be required by the directors of native labour in consultation with the medical officers of the W.N.L.A. General Botha went on to recall that in 1912, when the Government gave an assurance that the immigration of tropical natives would be restricted, the mortality returns from pneumonia

undoubtedly showed that such a course was necessary in the interests of humanity. Again during the debate on the Immigration Bill in 1913 the Government, while recognising that such restriction was then necessary, declined to ask the House to adopt the principle of barring for ever the introduction of tropical labour into the Union. He added: "Appeals for tropical labour had come not only from the mines: they had come from sugar plantations in Natal and Zululand, as well as from coal mines in Natal, and had been refused. There was increased and increasing activity in every direction in mining and manufacturing, and in farming industries calling for unskilled native labour and all looked to the Government to solve the problem. The Government was convinced that the successful results of Dr. Lister's prophylactic amply justified the experiment which it was thought would definitely prove whether pneumonia amongst natives employed on the mines could be actually stamped out. The Government's proposal was an experiment which would be of the highest value to humanity, and on its result would depend whether the Government should thereafter ask Parliament to sanction the withdrawal of the restriction against the recruitment of tropical natives." We cannot for the life of us see how anyone can quarrel with this plain and fair statement by the Prime Minister. The hysterical outbursts with which it has been received in some quarters carry their own condemnation.

A circular issued to shareholders of Rhodesia, Ltd., states that under war conditions and other circumstances the present realisable value of many of the company's assets has much depreciated. The board have recently had the opportunity of going thoroughly into the matter with Mr. George Stewart, the company's general manager in Rhodesia, during his recent visit to this country. It is proposed to deal with the position by writing off 3s. per issued 5s. share, and then to divide the unissued shares into 1s. shares, nothing paid. "Such a rearrangement of the capital will bring, approximately, into accord the face value and the present market price of the issued shares; and the rearrangement will not prejudice the relative position of shareholders, so far as the unissued shares are concerned, as it is the intention of the board, as soon as occasion arises, for the profitable employment of further capital in equipping the Sabiwa Mine, in gradually fully fencing and stocking the Glass Block Ranch, and in consolidating the company's interests in the town properties of Bulawayo, and in other ways developing the company's assets, to offer the reserve shares first to the shareholders on easy terms of payment."

\* \* \* \*

The Zaaiplaats directors' report for the quarter ended 31st January, 1918, states that the mill ran on 68 days during the quarter, crushing 3,419 short tons, the duty per stamp being 7.7 tons per 24 hours. The output for the quarter amounted to 101 long tons of concentrate, assaying approximately 70.0 per cent. metallic tin. The results of working show an estimated profit of £9,409 19s. 4d., excluding directors' fees and Government taxes, made up as follows:—Estimated profit for the three months' operations, £9,409 19s. 4d.; adjustments of estimated values of previous shipments of concentrates, nil; profit declared for the quarter, £9,409 19s. 4d. 71.15 long tons of refined tin, assaying 99.5 per cent. metallic tin, were extracted from the smelter during the quarter. The expenditure on capital account amounted to £358 5s. 7d., as follows: Machinery and plant, £358 5s. 7d. Work was restricted on account of shortage of native labour in all sections with the exception of No. 13, where developments were highly satisfactory. The main face is now large and high grade. The heavy rains experienced during the quarter interfered with prospecting operations. The connection drive between No. 6 and No. 13 sections advanced 260 feet. During the quarter 4,360 tons of ore were mined and disposed of as follows: Waste sorted, 9.1 short tons; sent to mill, 3,419 short tons; total 4,360 short tons. 32.58 inches of rain fell during the quarter. The excessive rainfall caused damage and loss of time in all departments.



## ORGANISING SAFETY WORK IN MINES.

### Important Report on the Means Best Adapted for the Promotion of Safety

[By H. M. WILSON AND J. R. FLEMING.]\*

DURING the past few years there has been marked progress in safety work by mining companies. Such work has usually been started and directed by an executive, with the aid and advice of individuals or committees reporting to him, independently of the operating department. The practice has been to awaken the interest of the employees in the causes, results, and avoidance of accidents; to convince them of the genuine desire of the company to bring about increased safety; and to obtain the co-operation of officials and employees in suggesting and adopting protective measures. At first there was some doubt regarding the permanency of a movement that had its inspiration in human welfare and for its prime purpose the safeguarding of life and limb. The experimental stage has passed, however, and from the united work of many hands and minds practical results are being obtained. Many mining companies have been quick to adopt the more desirable safety measures, such as the creating of safety departments and the requiring of more careful supervision at the mines. Mining laws have been greatly improved and more strictly enforced. Various local and national safety and standardising methods. The enactment by several States of workmen's compensation legislation, with the consequent insurance against casualties, has aided the safety movement. Much progress has been made in educational work through various agencies. Altogether the movement is commanding much attention and must result in saving many lives. As has often been the outcome in movements for human welfare, additional advantages other than those anticipated at first have resulted. Accident prevention has not only meant fewer injuries and consequently less suffering and distress to miners and their families, but has increased the efficiency of plant operation, so that economic gain has followed. The present tendency is toward standardisation and greater uniformity in the measures vitally affecting the safety and health of all employees. It is to be hoped that this tendency will fully crystallise, so that the valuable data furnished by experience, scientific investigation and experiment will serve as a useful basis in solving problems that confront the mining industry. The purpose of this report is to call attention to some of the means adopted for promoting greater safety in and around mines, in the hope that their presentation will stimulate activity and aid those endeavouring to solve safety problems in the different mining fields. It deals primarily with the organisation of safety work, which is a fundamental requirement for an effective campaign in accident prevention. Concerted action by officials and workmen is essential if this economic and humane movement is to have the success it merits. The Bureau of Mines has received many enquiries regarding safety organisation and the means of creating and sustaining interest in mine safety. To meet this demand the mining engineers of the bureau and the authors of this report have devoted much time to collecting data concerning the methods adopted by those companies that maintain safety organisations. An endeavour has been made to arrange these data in such a way as to present a system for practical application in either large or small mines, be they coal or metal. The existing organisation of every mining concern is adapted to the creation of a safety organisation. New employees will be necessary only for very large operations. It is not expected that a company employing a comparatively small number of men would adopt measures on the same scale as a company having many large operations, but the same general principles apply, and any variations need be those of degree only. The expense for safety work will, of course, vary; but experience indicates that whatever the investment, it will pay a good dividend. No special reference is made to the many mining

companies, both coal and metal, that have efficient safety organisations in operation, but the recommendations presented are based on a study of these.

#### ORGANISATION OF SAFETY WORK.

In organising safety work cordial co-operation and enthusiasm are essential. The definite purpose of a safety campaign is the immediate reduction of easily preventable accidents and a gradual reduction of all accidents. The number of accidents occurring annually is convincing proof that the problem demands a vigorous and continuous campaign backed by adequate financial support, and above all by the active sympathy and energy of some of the highest officials in each mining company. Experience has proved that satisfactory conduct of a safety campaign requires organisation for carrying out three branches of work, as follow: (1) An organisation that provides an enthusiastic and hard-working safety committee or department, an adequate inspection system, and hearty co-operation of officials and employees. (2) A system of education that will assist all employees to follow more carefully the safe and proper methods of work and will keep them constantly alert to the need of caution. (3) A scheme of safety measures designed to eliminate as far as possible dangerous conditions that have caused accidents or may cause them. The approximate relative values of these different factors have been estimated by R. J. Young, head of the safety department of the Illinois Steel Co., as follow: Organisation, 45 per cent.; education, 30 per cent.; safety measures, 25 per cent. In giving relative values to these factors the majority of the leading advocates of safety in the various industries place the greatest emphasis on organisation and education. The lowest value is placed on safety measures because of their inadequacy in themselves, so far as preventing most accidents is concerned. The figures, although a mere approximation at best, form a practical basis for promoting safety work. Preventable mine accidents are generally attributed to carelessness, insufficient inspection, inexperience, unsafe practices, lack of safeguards, violation of instructions, indifference, defective equipment, use of intoxicants, insufficient lighting, poor judgment, and other indirect causes. The "safety-first" movement aims at minimising such preventable accidents. "Safety first" means simply that safety must be the first consideration during any and all parts of the day's work, that every precaution be taken to prevent accidents by making conditions as safe as possible, and that the best and safest methods practicable be always employed so as to avoid unnecessary exposure to risk. The purposes of "safety first" are thoroughly practical. In some of the leading industries safety campaigns have resulted in reducing by 30 per cent., and even 70 per cent., the number of accidents that had been occurring annually for a period of years. The initiative in safety work must be taken by the management. Usually in starting an active safety campaign the officials hold a public mass meeting, at which data showing the possibilities of the work are presented to the employees.

#### SAFETY DEPARTMENT.

An organisation imbued with the value and importance of preventing accidents must get its inspiration from the president or owner. This must be passed down with undiminished vigour through the general manager, superintendent, foreman, and subordinates. The never-flagging interest of these officials in the safety of their workmen must be expressed and reiterated through the medium of rigid inspection, the installation of safety appliances, safety committees, the posting of notices and warnings, promotion of first aid and rescue training, provision for care of injured, and such educational means as lectures, rallies, and miners' field meets.

\*From Report of U.S. Bureau of Mines.

(To be continued.)



## THE FEBRUARY GOLD OUTPUT: GROUP RETURNS.

### Central Mining/Rand Mines Group.

The following are the results of crushing operations of the Central Mining/Rand Mines companies for the month of February:—

Company	No. of Stamps Running.	Tube Mills.	Tons crushed.	Total Fine Ozs.	Total Estimated Profit.	Estimated Working Costs per Ton.
Bantjes Cons. ...	90	3	15,530	4,893	*1,204	27 7-1
City Deep ...	154	9	58,000	27,023	47,247	22 2-8
Cons. Main Reef	220	6	45,020	15,757	8,767	25 2-8
Crown Mines ...	660	26	142,000	45,929	25,552	23 3-6
Dur. Rood: Dp.	100	3	21,700	8,490	739	31 10-2
East Rand Prop.	600	23	117,000	33,333	5,434	22 9-3
Ferreira Deep ...	280	7	44,200	16,351	16,505	23 2-9
Geldenhuis Dp.	300	7	46,200	13,210	1,032	23 3-9
Knight Central..	120	3	24,200	6,252	113	21 4-7
Modder B. ...	896	6	39,000	20,369	45,183	20 3-6
New Modder ...	180	7	50,000	29,319	64,880	22 9-7
Nourse Mines ...	180	5	36,400	11,360	2,329	24 8-0
Robinson ...	200	6	36,600	9,639	3,003	20 3-0
Rose Deep ...	300	7	50,400	13,733	12,313	17 9-3
Village Main R.	130	4	21,500	8,041	8,846	23 2-8
Wolhuter ...	120	4	25,100	7,619	3,902	22 2-5
Village Deep ...	180	7	40,100	14,126	2,438	28 0-9
Wit. Deep ...	195	5	29,500	7,173	*6,876	25 0-8

Tls. & averages 4,105 138 842,450 292,617 240,203 23 2-8

a Includes 4 Nissen-stamps. b Includes 16 Nissen stamps.

\* Loss.

*Ferreira Deep.*—Improvement due return to normal hoisting conditions after falls of ground in January.

*Witwatersrand Deep.*—Increased loss due heavy decrease in grade. Small tonnage owing to short month and minor pumping difficulties. Grade now improved; native labour position much better. Tonnage for March should show material increase.

*General Note.*—Owing to short month tonnage treated by all companies is lower than usual. Native labour position has generally improved. As forecasted in our cable of 26th February to our London office profits of Rose Deep, Geldenhuis, Wolhuter, the Village Main Reef, Village Deep, Robinson, Crown Mines, Consolidated Main Reef, Durban Deep affected by recent floods. Bantjes costs also affected.

### Goerz Group.

Results of operations on the producing mines of this group for the month of February:—

Company	Stamps.	Tons Crushed.	Total Revenue.	Revenue per ton
Geduld Proprietary ...	100	39,200	£58,738	30 0
Modder Deep Levels ...	70	39,500	83,350	42 2
Princess Estate ...	60	17,200	24,082	28 0
Totals ...	230	95,900	166,170	—

Company.	Costs.		Profit.	
	Total.	Per Ton.	Total.	Per Ton.
Geduld Proprietary ...	£39,270	20 1	£19,468	9 11
Modder Deep Levels ...	33,891	17 2	49,459	25 0
Princess Estate ...	26,138	30 5	*2,056	—
Totals ...	£99,299	—	£66,871	—

\* Loss.

### Glynn's Lydenburg.

The following are the particulars of this company's output:—Tons crushed, 3,410, yielding 1,272 fine ozs.; estimated value of month's output, £5,552; estimated profit for the month, £751. Operations were hampered by water troubles.

### Barnato Group.

The results of operations of the Barnato group for February are as follows:—

Mine.	Stamps.	Tons Crushed.	Revenue from Gold
Consolidated Langlaagte ...	100	40,300	£51,018
Ginsberg ...	65	10,800	11,552
Glencairn ...	160	17,500	12,301
Government Areas ...	180	103,000	154,478
Langlaagte Estate ...	200	37,900	44,954
New Primrose ...	140	17,200	13,865
New Unified ...	60	9,900	9,202
Randfontein Central ...	600	149,000	176,492
Van Ryn Deep ...	80	41,160	92,847
Witwatersrand ...	215	33,000	37,956
Totals and averages ...	1800	459,760	£604,695
January totals ...	1800	505,250	£661,111

Mine.	Total Working Costs.	Working Costs per Ton Milled. Shillings.	Gross Profit including Sundry Revenue.
Consolidated Langlaagte ...	£39,140	19-424	£12,141
Ginsberg ...	11,798	21-847	157
Glencairn ...	11,863	13-558	589
Government Areas ...	96,402	18-719	58,603
Langlaagte Estate ...	37,986	20-045	7,089
New Primrose ...	13,902	16-165	46
New Unified ...	8,613	17-399	642
Randfontein Central ...	156,613	21-022	20,909
Van Ryn Deep ...	41,758	20-291	52,062
Witwatersrand ...	32,130	19-472	7,301
Totals and averages...	£450,205	19-584	£159,225
January totals ...	£475,576	18-082	£190,628

Decreased profits all companies, excepting Government Areas and Van Ryn Deep, due to flooding of mines caused by abnormally heavy rains. It is expected March profits will also be affected in consequence.

### Consolidated Mines Selection Group.

The following are the results of operations for the month of February:—

			Stamps Working.	Tons Milled.	Working Cost per Ton Milled	
Brakpan Mines	...	...	110	49,400	21	6·610
Springs Mines	...	...	60	29,920	21	6·146
Totals and averages			...	170	79,320	21 6·433
			Value of Gold declared.	Yield per Ton.	Working Profit.	Working Profit per Ton.
Brakpan Mines	...	£86,139	34	10·49	£32,909	13 3·88
Springs Mines	...	62,595	41	10·09	30,413	20 3·95
Totals and averages		£148,734	37	6·02	£63,322	15 11·59

*Springs Mines.*—Cabled information has been received from London to the effect that the Imperial Treasury has refused an application for permission to allow shareholders on the London Registers of Springs Mines, Ltd., the right to take up one new share at £3 in respect of every ten shares held.

### Transvaal G.M. Estates.

The following are the particulars of this company's output for the month of February, 1918:—Central Mines: Ton crushed, 9,200, yielding 4,057 fine ozs. Elandsdrift Mine: Tons crushed, 1,200, yielding 746 fine ozs. Vaalhoek Mine: Tons crushed, 1,720, yielding 729 fine ozs. Estimated value of month's output, £22,967; estimated profit for month, £4,900.



Consolidated Gold Fields Group.

The following are particulars in regard to the outputs and profits for the month of February of the undermentioned companies of the Consolidated Gold Fields group:—

Company.	No. of Stamps.	Tube Mills.	Tons Crushed.	Gold declared, Fine Ozs.	Total Profit
Simmer and Jack ...	320	7	47,000	14,563	£17,208
Robinson Deep ...	120	8	45,000	14,326	9,012
Knights Deep ...	400	11	89,600	16,356	1,253
Simmer Deep ...	220	10	37,900	8,963	*2,733
Jupiter ...	80	5	19,600	5,433	797
Sub Nigel ...	30	2	8,300	5,370	8,303
Totals ...	1170	43	247,400	65,011	£33,840

\* Loss.

Reserve Gold.—Simmer and Jack, 5,300 ozs.; Jupiter, 225 ozs.; Sub Nigel, 2,871 ozs.; total, 8,396 ozs.

The sundry revenue included in the above total declared profit is as under: Simmer and Jack, £1,500; Robinson Deep, £51; Knights Deep, £215; Simmer Deep, £485; Jupiter, £682; total, £2,933.

Note.—With the exception of Sub Nigel, operations were seriously interfered with by further heavy rains.

Albu Group.

The following information is officially supplied regarding the February outputs of the producing mines of this group:

Company.	Stamps.	Tons Crushed.	Total Cost.
Aurora West ...	80	12,100	£13,769
Meyer and Charlton ...	75	8,710	13,230
New Goch ...	80	14,300	14,645
Roodepoort United ...	80	24,054	28,189
Van Ryn Estate ...	140	31,700	26,616
West Rand Consolidated ...	100	31,380	31,883
	555	122,244	£128,332

Company.	Cost per Ton.	Total Revenue.	Profit.
Aurora West ...	22·76	£14,167	£398
Meyer and Charlton ...	30·38	28,227	14,997
New Goch ...	20·48	14,719	74
Roodepoort United ...	23·44	26,957	*1,232
Van Ryn Estate ...	16·79	34,962	8,346
West Rand Consolidated ...	20·32	30,194	*1,689
		£149,226	£20,894

\* Loss.

The operations for February of all the mines of the group, excepting the Van Ryn Estate, were seriously affected by the unprecedented fall of rain on February 14, particularly in the Central and West Rand districts, followed by almost constant downpours during the remainder of the month, as a consequence of which the lower workings were flooded beyond the capacity of the pumping plants, necessitating the suspension of hoisting ore to allow of the utilisation of the skips for bailing water. It is anticipated that mining operations during March will be affected to some extent for similar reasons.

Aurora West.—It was only possible to hoist rock intermittently during the latter half of the month, the skips being employed mostly for bailing water, as the 14th level was entirely submerged on February 16.

Meyer and Charlton.—The mill ran intermittently during the last half of the month, the stoppages being equivalent to four days, including one stoppage of two complete days.

New Goch.—The bottom level was drowned out and the haulage of rock stopped for four days whilst bailing and pumping operations were in progress, involving the stoppage of the mill for 99 hours.

Roodepoort United.—The loss is due to decreased tonnage milled and additional working expenditure, both consequent on the flooding of the lower levels of the mine during the latter half of February, which involved continuous bailing with skips instead of hoisting rock, and, in addition to heavy abnormal expenses, entailed the loss of 42 milling hours during the month.

West Rand Consolidated.—The results were seriously affected by the abnormal increase in the water met with underground as a consequence of the recent floods, the rainfall during 12 hours commencing on February 14 measuring over 14½ inches. The underground pumping plant was unable to deal with the additional influx, and to prevent the water rising above the pumps bailing with skips had to be resorted to, involving a reduction of the ore hoisted and milled, with consequent loss of tonnage and revenue. Over 44 million gallons of water were pumped during February, with resultant greatly increased pumping charges, apart from the additional cost of bailing water.

PERSONAL.

Sir Harry Ross-Skinner has returned to the Rand after an absence of three years.

\* \* \* \*

Sir Abe Bailey gives notice, in the London papers, that he personally has retired from business, and any future business he may be concerned with will be on behalf of the financial and investment companies with which he is associated.

\* \* \* \*

We learn from Messrs. H. Davies & Co. that the firm has been turned into a limited liability company. Mr. Hubert Davies will remain at the head of affairs, as before, and a future of increasing usefulness and importance is assured to the undertaking in its enlarged form.

\* \* \* \*

Mr. J. S. Curtis, the well-known pioneer mining engineer, is at work on a history of the Rand, and he would be grateful to pioneers who may be in possession of copies of the first issues of the Rand papers of those days if they would communicate with him at Box 73, Johannesburg.

\* \* \* \*

The following is the list of certificates issued by the Mines Department for the month ending 28th February, 1918:—  
Mine Managers' Certificates (Metalliferous): T. Coulter, H. S. H. Donald, E. W. M. Elliott, E. Endean, J. S. Ford, F. G. Krause, D. Laurie, A. Rigney, E. Summers, J. Twinch, A. v. d. Bijl van Velden, E. H. Wells, S. J. Whitford, E. G. D. Wright; (Coal): H. Williamson. Mine Overseers' Certificates (Metalliferous): J. W. Ashley, H. Clarkson, C. L. Cowen, T. B. High, J. C. Lessing, G. T. Moir, W. P. Radcliffe. Electrical Engineers' Certificates: J. Winning. Assayers' Certificates: L. G. Bettany, G. Blomefield, W. H. Brookes, F. L. Ireland, J. Littlejohn, R. H. Rundle, E. M. Skea.

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The Council of the Institution of Civil Engineers have resolved that its examination in engineering drawing, bills of quantities, and elementary knowledge of specifications, which is at present an optional subject, shall be, after January 1, 1919, obligatory for all candidates for associate membership. The examination is intended to be a suitable test of the knowledge and skill which should be acquired during the requisite training in engineering offices, and will apply to the several main departments of practice. The tests in drawing and quantities may be conducted in part by means of the production of drawings and quantities which have been prepared by candidates under their employers and teachers. Students of the Institution may be allowed to take the examination prior to the time at which they become candidates for election as associate members.

P.O. Box 3807.

ROCKWOD PRESSED STEEL UNIONS

H. ALERS HANKEY - - - Sole Agent.



Rhodesian Section.

RHODESIAN MINERAL OUTPUT FOR JANUARY.

Detailed List of Producers—Good Returns Despite the Rains.

We have received for publication from the office of the Rhodesia Chamber of Mines (Incorporated) the following detailed statement of the mineral output for the month of January, 1918, with comparisons and values:—

MATABELELAND.				
	No. of stamps.	Tons treated.	Yield. Ozs.	Value. £
BULAWAYO DISTRICT—				
Abercorn (W. J. Lane)	5	105	89.55	371
Agincourt (S. Levin)	5 1P	394	114.41	474
Annasona (Rhodesia, Ltd.)	3 1P	306	336.83	1,396
Do. (sands)	—	325	34.82	144
Antelope G.M. (Rhod.), Ltd.	2BM2P1T	3,465	756.07	3,206
Do. (sands)	—	3,187	854.12	3,621
Bassick (C. Brunton), by-products	—	—	12.20	49
Poomani (R. Aserman)	5	216	54.97	228
Boomerang (Boomerang Syndicate), clean-up, November	—	—	7.39	31
Bushtick Mines, Ltd.	8 N	1,711	134.78	59
Camp (Carson Mines, Ltd.)	5 1P	815	128.76	534
Do. (sands)	—	480	35.73	148
Cam Stick (Iron Duke Syndicate No. 2), sands	—	210	45.43	188
Cecil (Master Cecil Syndicate)	3	49	12.35	51
Colleen Bawn (C. Brunton), by-products	F	—	57.62	230
Confidence (A. D. Hall)	10	487	57.85	240
Do. (sands)	—	280	20.82	86
Coxswain (W. Lee)	3	40	32.28	134
Donove A. (W. K. Early)	5	66	54.83	227
Durban (Durban Syndicate)	5	350	188.55	782
Do. (sands)	—	183	52.25	246
Eagle Hawk (T. Berwitz), Dec.	5	210	45.73	190
Farvic (H. S. Henderson)	5	317	377.05	1,599
Do. (sands)	—	306	70.85	300
Do. Adjustments, Sept. & Oct.	—	—	2.14	10
Fred (Trans. and Rhod. Synd.)	10 2P	1,850	992.56	4,115
Do. (sands)	—	1,850	338.72	1,404
Friend (W. Arbery)	5	160	157.09	651
Germania (A. G. Hadingham)	2 1P	638	219.45	910
Do. (concentrates)	F	—	171.47	703
Hillside Surprise (R. Aserman)	5	200	104.98	435
Jeffs (Jeffs, Ltd.)	3	169	96.90	402
Jessie (Jessie Tributors)	10	895	141.18	585
Do. (sands)	—	458	16.34	68
Jumpers (J. P. McCay)	5	135	61.26	254
Do. (Tailings, Ltd.), slags	F	—	17.59	70
Kangaroo (J. C. Darch), panings	—	—	.42	2
Lochade (Lochade Syndicate)	5	311	65.11	270
Lone Hand (Armstrong, Furber and Alexander)	5 1P	340	105.29	436
Do. (sands)	—	230	—	—
Lonely Reef G.M. Co., Ltd.	20 3P	5,080	1,593.55	6,606
Do. (slimes)	—	5,080	3,217.77	13,339
Long John (Susanna Mines, Ltd.)	2 GR	2,094	347.99	1,443
Do. (sands)	—	2,094	—	—
Lotus A. (R. Aserman)	5	51	27.17	113
Matabele 3 (Criterion Gold Mines), clean-up	—	—	30.64	127
Matabele Queens Co., Ltd.	10 2P	450	142.03	589
Do. (sands)	—	450	90.31	374
Nelly (F. D. Roscoe), Dec. clean-up	—	—	33.84	135
New Eclipse (J. R. Stewart)	5 1P	1,285	333.19	1,381
Newfontein (A. H. Newton)	3	340	211.37	876
Do. (sands)	—	180	26.47	110
Pompara (H. Ashburner)	3	50	17.76	74
Prestwood (H. S. Henderson), Nov.	5	51	44.49	189
Princess (C. A. Abbott)	2	38	7.58	31
Red Rose (F. C. Barrett), concentrates	—	—	21.26	88
Slope 1 (E. E. Beercoft)	5	279	44.03	183
Do., clean-up	—	—	3.74	15
Star (Eastern Queen) (Romola Nigel G.M. Co.)	5	143	31.53	131
Do. (sands)	—	156	33.96	141
Stocks Luck (E. W. Bosomworth)	5	300	91.27	381
Do. (sands)	—	250	33.46	139
Swart Boy (Warren & Guest)	5	140	111.55	462
Teutonic (W. & A. Syndicate)	5 1P	332	147.80	613
Bulawayo district total			12,802.84	53,248

GWELO DISTRICT—				
	No. of stamps.	Tons treated.	Yield. Ozs.	Value. £
Babs (Monger, Beach & Boby)	H	2.2	123.46	533
Bush (G. M. Hughes), December (clean-up)	—	—	7.16	3
Collingwood (Wanderer G.M.)	GR	3.54	5.19	21
Commonage (H. W. Gray)	1 T	474	43.78	181
Comrades (Bradley & Masters), sands	—	417	27.16	113
Conqueror (Leppington & McConkey)	2	150	112.74	467
Connemara (Connemara Syndicate)	20 1C	3,847	323.93	1,343
Do. (sands)	—	2,714	465.85	1,931
Do. (slimes)	—	1,133	268.05	1,111
Csardas (Wolfshall Syndicate)	10	354	111.18	461
Do. (sands)	—	270	41.16	171
Do. (slimes)	—	84	—	—
Emerald (F. M. Linsett), Nov.	5	400	53.61	222
Do. (December)	—	315	33.69	134
Falcon Mines, Ltd.	25N 2T	15,012	3,128.40	13,139
(Copper & silver values not given.)	—	—	—	—
Fed Up (A. Malcolm)	5	150	124.16	515
Gaika G.M. Co., Ltd.	5 1C 1T	3,345	103.444	4,328
Do. (sands)	—	4,093	470.18	1,994
Glen Arroek (Glen Arroek Synd.)	5	75	140.21	581
Glen Hume (Glen Hume Synd.)	10	1,164	114.98	477
Do. (sands)	—	1,080	55.09	228
Glen Rosa (Glen Rosa Syndicate), Balance, December, 1917	—	—	96.20	399
Do. (sands), December, 1917	—	125	71.39	296
Do., January	10	425	195.31	810
Do. (sands)	—	300	63.30	262
Globe & Phoenix G.M. Co., Ltd.	40 12P	6,232	6,619.04	27,800
Do. (sands)	—	7,299	1,089.06	4,574
Do. (slimes)	—	300	—	—
Gold Prince (T. A. Carke), pan'gs	—	—	6.24	25
Ingondomo (F. C. Luxat), sands	—	420	35.63	146
Leopard (Leopard Trib. Syndicate), copper plate	F	—	3.62	13
Loyalist (B. Bertoldi)	3	168	18.82	78
Moss (W. M. James)	5	859	292.86	1,214
New Dunraven G.M. Co., Ltd.	5	906	66.11	274
Do. (sands)	—	500	18.02	75
Royalist (J. Austin)	5	640	139.75	579
Selukwe Columbia G.M., Ltd.—				
Chimborazo	10 1P	605	183.65	761
Do. (sands)	—	367	50.77	210
Danga	10 1P	503	127.62	529
Do. (sands)	—	304	35.28	146
Snark (J. G. Walter)	5	259	35.04	145
Tabekwe (A. N. Tyrrell), sand	—	—	53.76	223
Trixie (S. Levin)	10 1P	664	96.97	402
Veracity (L. R. Evans)	5	650	161.84	670
Do. (sands)	—	360	61.47	255
Walrus (J. Jones)	5	300	70.42	292
Wanderer (Selukwe) G.M., Ltd.	4 GR	11,590	931.78	3,863
Zabonkwe (Holmes & Truquhart)	5	810	128.79	524
Do. (sands)	—	590	—	—
Do. (slimes)	—	220	—	—
Meikle Bros. (proceeds copper plate)	F	—	.14	1
Gwelo district total			17,347.21	72,645

MASHONALAND.				
	No. of stamps.	Tons treated.	Yield. Ozs.	Value. £
HARTLEY DISTRICT—				
Acorn (Anzac Syndicate)	5	410	179.05	742
Do. (sands)	—	308	40.12	166
Affaire (A. E. Ward)	5	100	50.15	208
Alexandra (Alexandra Syndicate)	5	490	137.97	572
Do. (sands)	—	295	17.14	71
Arlandzer 6 (G. C. Hooper)	31 P	755	5.08	21
Do. (sands)	—	755	51.51	214
Axe (J. Davidson)	3	64	16.86	70
Baltimore & Virginia (P. A. Enke)	5	312	36.15	150
Cam and Motor G.M. Co., Ltd.	RP	10,782	4,472.22	18,962
Dagon & Tsessebe (Macfarlane and Clesham)	C	510	124.81	517
Dalry 1 W. (Macdonald & Sale)	C	478	42.02	174
Do. (sands)	—	780	97.14	403
Dreadnought (Dreadnought Synd.), sands	—	600	29.27	121
Eiffel Blue (Willoughby's Cons. Co.)	10	1,236	533.35	2,211
Do. (sands)	—	720	23.85	99



	No. of stamps.	Tons treated.	Yield. Ozs.	Value. £
Fifteen Annual Mining Co., Ltd.	12N 2T	4,178	495.66	2,055
Do. (sands)	—	4,117	1,010.47	4,109
Do. (slags)	F	—	57.15	229
Emmey Est. (E. G. Goodyer)	5	300	55.31	229
Do. (sands)	—	180	16.57	69
Glasgow Mines, Ltd.	5	517	183.04	759
Do. (sands)	—	224	37.95	157
Glebeurn (Pekstone G.M., Ltd.), slimes	—	1,276	101.87	422
Golden Valley (J. Mack & Co.)	10 1P	1,283	427.36	1,712
Do. (sands)	—	780	119.94	497
Heroine (A. B. Ward)	5	250	134.12	556
Do. (sands), Dec. and Jan.	—	300	38.83	161
Jackie's Luck (Mrs. Sarah Smith), undeclared, December	—	—	5.16	21
Kanyemba (Kanyemba Synd.)	10	640	277.96	1,152
Kanyemba (Kanyemba Synd.)	10	640	277.96	1,151
Do. (sands)	—	420	154.31	640
Kelvin (Westco Syndicate)	2	96	32.79	136
Lily 1 (J. Barnes)	2	200	114.68	475
Mari (J. Thornett)	3	726	74.89	311
Mountain Dew (Boomerang Synd.)	10	600	221.22	917
Owl (A. Rolfe)	10	1,164	396.04	1,642
Do. (sands)	—	1,164	209.34	868
Owl (Extension (Cribb & Secar)	10	1,510	303.28	1,257
Do. (sands)	—	1,334	101.30	420
Pickstone (Picks one G.M. Co., Ltd.), slimes	—	1,356	111.75	463
Pomposo (J. Knott)	2 N	256	45.10	187
Princess (Heard & Henderson)	(5)	70	34.84	144
Revic (Ambrose & Aitken)	5	740	125.88	522
Do. (sands)	—	570	60.63	251
Seigneury (N. A. Arnold), Nov.	10	600	69.72	289
Shepherds (Begbie & Jackson)	5 1T	435	135.28	561
Do. (sands)	—	573	107.71	446
Tel el-Kebir (Voik & Kerr), clean-up	—	—	4.63	19
Tiger (Clark & Blackburn)	5	272	91.10	378
Venice (Louis Heilman)	2	95	44.89	183
What Cheer (H. Moser)	10	790	183.46	761
Do. (sands)	—	500	44.81	186
Yellowstone (S. Hemlock)	5	215	53.27	221
Do. (sands)	—	200	21.51	102

Hartley district total

11,597.09 48,490

LOMAGUNDI DISTRICT—				
Alluvial (L. J. Viviers)	—	—	5.27	22
Angwa (F. L. Standen)	5	378	47.82	198
Crescent (Crescent Synd.), copper	F	—	10.60	42
Eldorado Banket G.M. Co., Ltd.	20 1C	4,140	1,745.85	7,407
Do. (sands)	—	2,402	441.35	1,812
Do. (slimes)	—	1,867	—	—
Gloria (Gloria Syndicate)	5	240	26.41	110
Gondia (J. A. Morris), adjustments, November, 1917	—	—	—	2
Lone Hill (Day & Hallward), September, 1917	—	—	2.01	8
Maggiemae (J. McMurdon)	5	500	95.74	397
Do. (sands)	—	20	10.48	43

Lomagundi district total

2,385.53 10,101

MAZOE DISTRICT—				
Hopeful	2	303	72.33	300
Iron 1 (J. M. Laing)	5	1,040	72.22	299
Do. (sands)	—	620	63.90	265
Jumbo (J. Bloom)	5	681	191.36	793
Do. (sands)	—	250	13.97	58
Kimberley (Mash.) G.M. Co., Ltd.	8N 2T	3,500	655.34	2,779
Do. (sands)	—	3,500	294.19	1,248
Kingsley Hoard (A. S. Warwick)	5	130	26.95	112
Do. (sands)	—	450	15.09	62
Maori Chief (D. MacLean), balance, January	5	174	23.50	97
Micky (Micky Syndicate)	2	170	43.44	180
Mitre (E. W. L. Noakes)	2	155	77.27	320
Do. (sands)	—	120	28.17	117
New Found (L. H. Kelly)	2	48	13.81	57
Peveril of Peak (Gilmour Southey)	2	55	11.95	50
Promoter (F. C. Croxford)	C	2,750	60.98	253
Do. (sands)	—	2,036	52.59	218
Rosa (R. Aserman)	C	1,580	158.05	655
Do. (sands)	—	1,600	99.05	411

Mazoe district total

1,974.17 8,274

SALISBURY DISTRICT—				
Alpes (P. Zalfere)	5	102	307.79	1,210
Beatrice (New Beatrice G.M. Co.)	10	240	263.96	1,094
Cross-your-Luck (W. A. Hoore)	5	38	41.25	171
Found A. (Guy's Syndicate)	1.M	360	72.07	301
Joking and Euchred (Harrison and Drabble)	5	362	233.02	966

	No. of stamps.	Tons treated.	Yield. Ozs.	Value. £
Joyce (Ellsmoor & Wyper)	5	450	90.18	374
New Full Back (New Full Back G.M. Syndicate)	2	102	29.18	121
Planet (Planet Tribute Synd.)	5 1T	830	198.10	821
Do. (slimes)	—	830	271.21	1,124
Radnor 1 (Radnor Mines, Ltd.)	5 1P	1,470	314.35	1,303
Shamva Mines, Ltd.	56N 9T	51,365	4,170.20	18,043
Do. (sands)	—	26,264	4,704.38	19,947
Do. (slimes)	—	24,857	—	—
Trio (Trio Syndicate)	5	180	134.62	558

Salisbury district total

10,830.91 45,699

UMTALI DISTRICT—

\*Umtali district total

2,553.41 10,910

\*Particulars not yet to hand owing to interruption of traffic.

VICTORIA DISTRICT—

Cambrian (J. & D. Laing)	10	650	333.10	1,381
Do. (sands)	—	500	241.68	1,002
Do. (slimes)	—	150	—	—
Empress (S.A. Pros. & Con. Synd.)	8	1,115	84.50	350
Do. (sands)	—	850	72.28	300
Do. (slimes)	—	265	—	—
Good Luck (S. A. Taylor), sands	—	680	47.90	198
Texas (Texas Syndicate)	5	740	128.83	534
Do. (sands)	—	560	65.37	275

Victoria district total

974.66 4,040

(P) Grinding Pan; (BM) Ball Mill; (T) Tube Mill; (H) Huntington Mill; (GR) Gates' Rolls; (B) Ball Mill; (Pn) Pneumatic Stamp; (N) Nissen Stamp; (C) Chilian Mill; (RP) Roasting Plant; (F) Treated at Falcon Mine; (WM) Waterfall Mill; (LM) Laue Mill.

## SUMMARY OF PRODUCTION.

	Value.
December, 1917	£270,616
January, 1918	253,807
Decrease	£16,809
January, 1917	£296,112
January, 1918	253,807
Decrease	£42,305

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## MINE MANAGERS' ASSOCIATION: PRESIDENTS' ADDRESS.

### War Problems—Future of the Jack-hammer—Underground Contracts—Health and Accidents.

At the annual meeting of the Association of Mine Managers of the Transvaal last week, Mr. Healey (who was in the chair) moved the adoption of the report, and, after referring to the death of Mr. W. Laurie Hamilton and Col. F. J. Trump, D.S.O. (the latter killed in action), he dealt with the difficulties with which the mines had had to contend. Proceeding, he said the shortage of supplies had taxed the ingenuity of all, and economy in stores had become almost an obsession. The mine with the big scrap heap had scored tremendously. The remarkable achievements, too, in the character and class of work it had been possible to turn out of their shops and local foundries reflected credit on the engineers and mechanics. Obviously a number of the articles they were manufacturing to-day, owing to necessity, would not bear comparison with the imported article in normal times. Their object was being accomplished, however, and they were richer for their experience. During the year the serious shortage of native labour had further stimulated the search for a substitute for the hammer-boy. The result had been a more general utilisation of the jack-hammer drill for stoping. He might be accused of undue optimism when he hazarded the opinion that the jack-hammer drill had come to stay. But he went further, and also expressed the opinion that the successful use of the jack-hammer as a stoper was the most important step in advance, from an economic standpoint, to be recorded for the year. It was disappointing that they could not yet report the success of the efforts of the Association to have the rates of pay for machine-boys put on a more satisfactory basis. The matter was still under consideration. The difficulties in the way of finding a satisfactory basis that would meet the requirements of all the mines might be great, but he ventured the opinion that they were not insurmountable. It was a generally accepted fact that the actual drilling time of the rock drill underground did not, on an average, exceed 60 per cent. of the time that they might reasonably expect of the machine. The lack of an adequate incentive to induce the native running the machine to put forth his best efforts was in a measure a contributing factor in this loss of efficiency. The importance of the Association's efforts in this direction was obvious.

#### UNDERGROUND CONTRACTS.

Regarding the report of the Government Departmental Committee on the systems of underground mining contracts, the Association appointed a committee to go into the whole question of contracts, and its recommendation had been accepted and sent to the Chamber of Mines. The form of contract recommended had the virtue of uniformity and clearness, which, if adopted, would tend to do away with the many misunderstandings which had arisen in the minds of the miner, due to the altogether unnecessary number of variations in the forms of contract in use on the Rand to-day. The Safety First campaign had continued unabated. It was encouraging to note that the accident death-rate on the Witwatersrand gold mines for 1917 was 2.64 per 1,000, as against 3.16 for 1916. This represented 170 less fatalities. The adoption by a number of mines of the native "leading hand" system had been a material factor in the success of the movement. These native "leading hands," or glorified boss-boys, were selected from experienced and intelligent natives, and systematic instruction in safety measures was given them. In addition, on a number of mines first-aid classes for natives had been instituted. The successful

results attending these measures were encouraging. The health conditions underground continued to improve. Further, coupled with the safety-first propaganda amongst the natives, a serious attempt was being made to educate the native, especially the boss-boy, to the importance of the use of water in drilling and keeping his working-place wet. He believed a great deal more could be accomplished in this direction than was perhaps generally recognised. As to the silicotic employment office, the mines were employing on December 31, 907 silicotics, a considerable improvement on the figure for the previous year. He believed he was right in stating that the mines were now giving preference wherever possible to the silicotic sufferer. It must be realised, of course, that the number of billets on the mines for which these men were suitable was limited. Every effort was being made by the employment office to get into touch with other employers of labour, and it was encouraging to note that to date a large percentage of the billets found for these men had been in other industries in the Transvaal and elsewhere.

#### New Kleinfonteins.

Appended are details of the operations on the property of the New Kleinfontein Company for the month of February: Stamps, 250; days, 22; tube mills, 8; tons milled, 51,810; gold recovered, 16,079 fine ozs.; net value, £66,726; profit, £3,193; working costs (excluding development), £1 2s. 9d. per ton; development to working costs, 1s. 9d.; total working costs, £1 4s. 6d. per ton; capital expenditure, £1,394. In addition to the interruptions caused by the stoppage of the power plant, further heavy rain has necessitated the continual use of skips for baling, adversely affecting tonnage, costs and profit.

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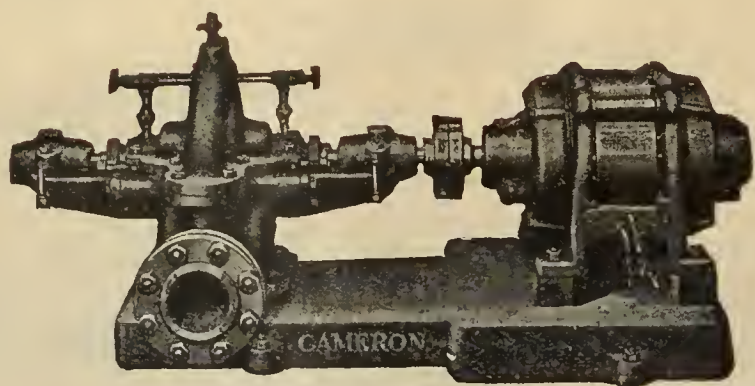
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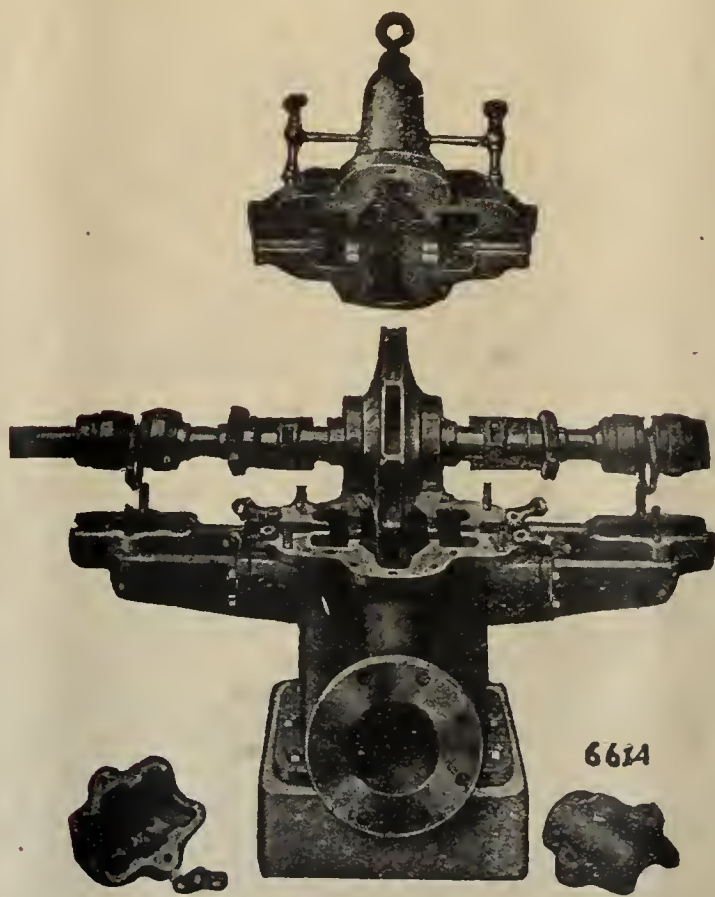
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## OFFICIAL REVIEW OF MINING CONDITIONS.—VIII.

### Extracts from Reports of Inspectors of Mines.

FROM the annual report of the Orange Free State Inspectorate (Mr. G. E. B. Frood), the Government Mining Engineer extracts the following:—

*Prosecutions.*—There is not a single case to be recorded either in the Magistrates' Courts or under the jurisdiction of the Inspector of Mines. Neither has any case been reported as having been dealt with by managers under Regulation 156 (4). It is, of course, mainly in connection with underground operations that breaches of the Mining Regulations are likely to occur, and comparatively little of this work has been in progress during the year. The collieries, certainly, have been going on as usual; but, as I have remarked in previous reports, it appears to be part of the genius of coal mining in these parts, either that misdemeanours do not occur or that, if they do, the acts do not come to the knowledge of those whose duty it is to report them.

*Labour.*—Owing to the gradual increase in diamond mining operations, there has been a large addition to the total labour employed, though the figures are still a long way short of normal. The larger output from the collieries has not led to any increase in the native labour employed, but distinctly the reverse. I believe this is entirely attributable to the greatly improved conditions now prevailing on these mines and to the better stamp of native consequently becoming obtainable. There is here afforded, in fact, a good example of the benefits of true economy, as opposed to false economy; for I understand that, in spite of higher wages and shorter hours, the net results are all to the good. The supply of native labour throughout the year has continued ample to meet the comparatively small call now made. *Diamond Mines.*—In the first month of the year, Jagersfontein and Koffyfontein resumed production, but only on a strictly limited scale. Operations were confined to washing "blue" from the stock on the floors and no ground has been broken in the mines. Blaauwbosch started full operations in March and New Eland followed in April. Towards the end of the year the Monteleo joined the group of producers. The last is a new proposition, not yet proclaimed, apparently of small size, but giving promise of satisfactory results otherwise. For the last month of the year we had an average of 364 whites and 2,267 natives employed on the diamond mines of this Province, as compared with 1,175 whites and 10,379 natives in the December preceding the outbreak of war. These figures indicate how little this industry has progressed towards normal conditions so far as the Free State is concerned. So far as regards our chief mines, Jagersfontein and Koffyfontein, the resumption of washing by itself, especially on so limited a scale, could not have been expected to effect much amelioration in the conditions affecting the communities dependent on the mines, nor does it appear to have done so. At the same time there has been no indication, so far, of any immediate intention to restart actual mining, and until this takes place there is no hope of any great change for the better.

*Alluvial Diamond Diggings.*—There is continued improvement in the output from the diggings on the Free State side of the Vaal River, 1,503 carats, of a declared value of £9,964, having been produced this year as against 1,042.5 carats, valued at £5,253, last year. The average price per carat has risen from £5 0s. 9d. last year to £6 12s. 7d. this, representing an improvement of 31.6 per cent. in price. This year, for the first time, we are called upon to record an output from the alluvial gravels on the north side of the Orange River. Little more than a start has been made there and no farm has yet been proclaimed, but from the prospecting (or so-called prospecting) that has been in progress 458 carats of a declared value of £3,131 were reported as recovered up to the end of the year. The average price per carat, worked out on the declared values, is about £6 16s. 9d. per carat, but there is reason to believe that the actual price realised may be greater. In actual fact, the

diamonds from this field are found to be as fine, on the whole, or very nearly so, as those from the lower Vaal diggings, and should command very nearly the same price. The first discovery of diamonds on the Orange River goes back so far as 1867, and it is very singular that the possibilities of this field should have remained so long unexploited. Present interest starts with the discovery of a diamond in a railway cutting on Poortje, a farm on the Orange River, nearly directly opposite the town of Aliwal North, in the early part of 1914. Only a few more or less insignificant finds were made at this time, and with the collapse of the diamond market on the outbreak of war all prospecting work was shortly suspended. With the resumption of operations, however, early in the present year, quite a new era was inaugurated. A rich patch of gravel was struck almost right away, and by the end of May 49 stones had been registered, weighing approximately 126 carats and valued at the time at £983, but subsequently, in a rising market, actually sold at a considerably higher figure. One stone discovered at that time was a fine yellow of 63 carats. Towards the end of August, finds began to be made on the farm Badspruit, on the Cape side of the river, about eighteen miles down from Aliwal North. The results here were quite phenomenal, 193 stones, weighing 367 carats, being recovered from between 200 and 300 loads of ground actually washed up to the 16th September. Confining attention now to the Free State side of the river, a small but fairly rich patch was opened up at Sanddrift, opposite Badspruit, shortly after discoveries began to be made on the latter farm. More lately, likely-looking gravels began to be opened up on the farm Klipfontein, the second farm down the river from Poortje, and six or seven miles from the town of Aliwal. In December, the recoveries from this farm, as registered, amounted to 150 carats of a declared value of £1,158. The last discovery intimated is at Kortkom, part of Eenzaamheid, between Bethulie and Norvals Pont. A few stones have been registered from here and indications are said to be promising. Until lately, discoveries had been confined to the neighbourhood of the river down from Aliwal, but a recent discovery on the Cape side, well up from that town, has opened up fresh possibilities in this direction. It appears premature to offer any opinion on this new field, further than that it is bound to become a factor of some importance in the diamond industry. It is already becoming apparent that it is not by any means confined to the vicinity of Aliwal North, and much will depend on the discoveries that may be made lower down the river. There is certainly at present an appearance of patchiness, but I do not understand that this characteristic is by any means confined to the gravels of this new field.

(To be continued.)

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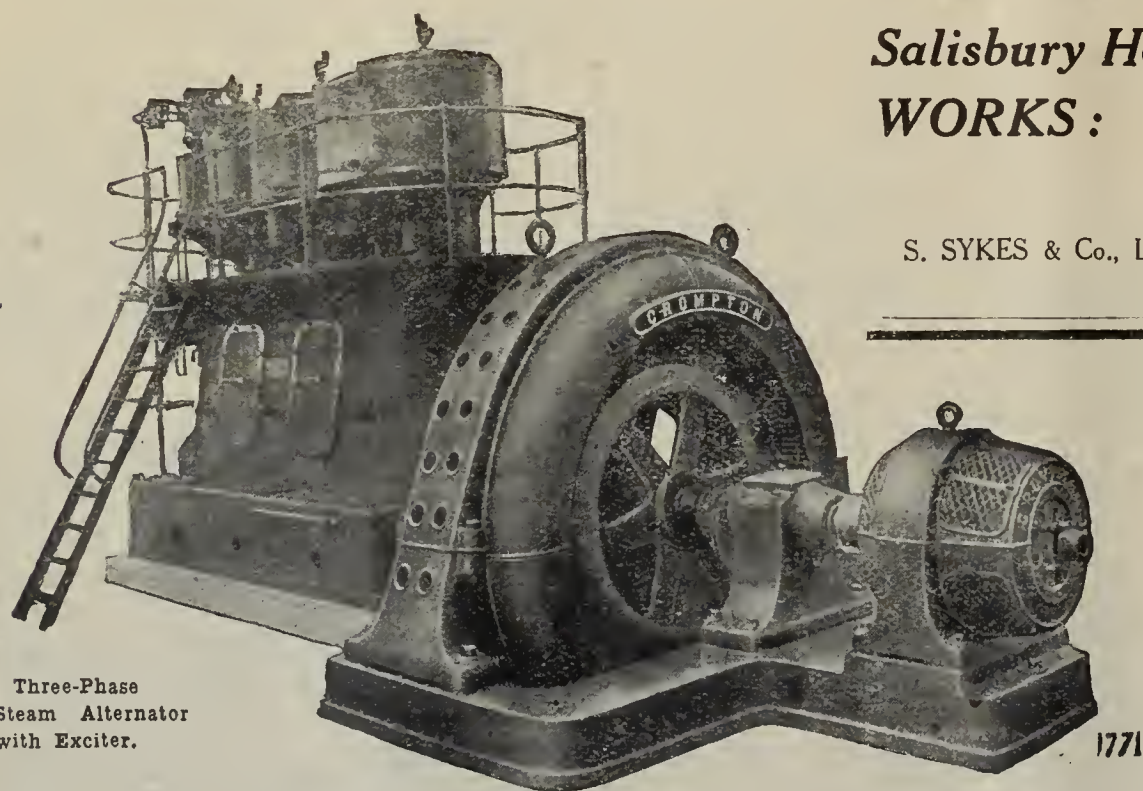
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## Engineering Notes and News.

### TESTING AND MAINTAINING THE EFFICIENCY OF DRILLS.

[BY H. H. HODGKINSON.]

THE New Jersey Zinc Company, Franklin, N.J., was among the first to realise that efficiency in mining depends largely on supplying the men with efficient drills—machines which will drill rapidly; whose air consumption is low; whose maintenance is a minimum; and machines which, when put to work, will stay on the job. In the testing and development of drills, the company has gone to considerable expense, and judging from the results obtained, it has unquestionably paid to do so. When a new type of drill is received, every effort is made to get the best results in regard to drilling speed and air consumption that can be obtained from that drill, and in addition the maker is given every assistance possible in his effort to develop a drill to meet the condition at hand. A drill testing plant has been established at the mine, in an abandoned pump station in the limestone hanging-wall. This white, coarsely crystalline limestone makes excellent ground in which to test the drilling speed of machines, having the advantage of being more homogeneous than the ore, while at the same time it has about the same drilling speed. The roof and sides of the old pump station afford an ideal place to test drills, making set-ups most convenient. Compressed air is delivered to the station by means of a 3 in. pipe, at an average pressure of 95 lb. per sq. in. The apparatus used for testing the air consumption of a drill consists of two tanks both of the same dimensions, made by screwing blind flanges to the ends of a 12 in. pipe and boring out and tapping the pipes and flanges to make the necessary connections. The one tank is equipped with two gauge glasses, upon each of which a marker is placed at an interval of  $3\frac{1}{4}$  in. The other is filled with water by means of a  $\frac{3}{4}$  in. pipe, which is fitted with an elbow plug to facilitate the refilling of the tank when required. By means of a  $1\frac{1}{2}$  in. four-way valve, compressed air is supplied to the small receiver, alternately from the two tanks. When the first tank starts to supply the air, the second tank is full of water, and the meniscus in the gauge-glass is at the lower marker; as the air passes out of the first tank the water in the second tank flows through a connecting pipe and rises in the first tank until it reaches the upper marker; in the meantime the volume of water which passed over this tank has been displaced by an equal volume of compressed air. The valve is then reversed quickly by means of the lever, and the water gradually returns to the second tank, the air displacing the water in the first tank until the meniscus in the lower gauge-glass reaches the lower marker, and so on. The water is coloured so that the meniscus is clearly defined in the artificial light. To facilitate the passage of the water back and forth between the two tanks, the connecting pipe is 2 in. in diameter, while the remainder of the piping is  $1\frac{1}{2}$  in. The third tank is a small wrought iron receiver, which acts as an equalising reservoir and supplies air to the drill at a more constant pressure and in addition catches any water in the air, or water which might have possibly come over from the first and second tanks in case the four-way valve has not been closed properly, thus preventing the water from reaching the drill. This tank makes it possible to read the pressure gauge mounted at the top of the tank more accurately, as the indicator of the gauge does not flutter with each movement of the valve of the drill, as would be the case if it were not in the system. At the bottom of the receiver tank is a small pet-cock to drain any water so that the volume of the receiver is not cut down, in addition to keeping it away from the drill. Another small pet-cock is provided for the purpose of raising or lowering the water in the tanks to the markers in order to start a test. By using these tanks in testing a drill, the volume of compressed air is kept constant for each run, while the time, inches

drilled and air pressure are the variables; that is, five tanks of compressed air are supplied for a run which is equivalent in this case to 11.38 cu. ft. The time required by the drill to consume this amount of air, the inches drilled and also the pressure in pounds per-square inch are recorded. A  $1\frac{1}{4}$  in. raised centre cross-bit is the standard used for testing purposes, and the condition of the bit at the end of each run is noted as being either fine, good, fair or poor. Good results cannot be obtained when the drill bits are poorly made.—*Engineering and Mining Journal*.

The building returns issued by the Town Engineer's Department of the Johannesburg Municipality show an upward tendency for January in the value of the structures erected. These figures are:—Plans approved: Dec., 1917, 214; Jan., 1918, 198. Buildings—Brick: Dec., 1917, 139; Jan., 1918, 119. Wood and iron: Dec., 1917, 29; Jan., 1918, 55. Value of buildings: Dec., 1917, £83,557; Jan., 1918, £107,302.



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## THE WEEK IN THE SHAREMARKET.

### Panic in Government Areas—Subsequent Partial Recovery—Improvement in Sub Nigels.

THE announcement in Saturday morning's paper that the Committee of the House of Assembly had recommended the non-acceptance of the Government's provisional agreement with the Government Areas, came as a bolt from the blue. At the opening a wild rush to sell took place. The stock, which had closed overnight at 75s. 9d.—76s., made a first sale at 73s. and from thence, through a series of transactions at different prices closed at 71s., the lowest point touched being 70s. 9d. The whole call was depressed in consequence, the only three stocks not unfavourably affected being New Modders, Gedulds and City Deeps. Modder Easts and their options were again weaker. Dealing continued active in Government Areas all through the morning, the price keeping steady round about 71s., closing at 71s. 6d. Springs Mines hardened somewhat, advancing to 69s. 9d. On Monday morning, people came somewhat to their senses regarding Government Areas, probably realising that the difference in value amounted to less than 5 per cent. per annum. The price advanced to 72s. 3d. and this was maintained at the call. Springs Mines were in considerably better demand at improved rates. African Farms and Zaaipplaats also regained a considerable portion of their recent losses. During the forenoon Government Areas made a further advance to 72s. 9d.; Sub Nigels to 22s. 9d. and 23s.; Zaaipplaats to 13s.; Modder Easts to 21s. 9d.; and Springs to 70s. 9d., the latter, however, easing off subsequently. On Tuesday morning there was very little change in prices. Government Areas, Springs, Van Ryn Deeps, Sub Nigels, New Modders and Modder Easts were all firm with an upward tendency. The weakest feature was City Deeps. Government Areas, Springs Mines and Modder Easts eased off in the forenoon. Prices eased off on Wednesday morning with few exceptions, these being found in Geduld Props and Sub Nigels, which were firm at best, and Mines Selections, New Modders and Pretoria Cements with substantial advances. The other favourites and nondescripts all suffered. Daggafontein Options touched their lowest level with a sale at 7s. 6d. The market opened firmer on Thursday morning and the improvement was maintained at the call, all the favourites being to the good as against yesterday's quotations. Sub Nigels are at last coming into their own after weary months of neglect. Modder Easts and their options have seldom been so neglected as they were this morning. African Farms also are dying away after their late spurt. An unusually small amount of business has been done in outside stocks during the past week. Sales: Southern Van Ryns, 10s. 3d.; Monteleos, 33s. 6d., and for odd lots, 35s.; Phoenix, 10d.; Sakalavas, 12s., 11s. 9d., 11s. 6d. and 11s.; S.A. Alkalis, 70s., 72s. 6d. and 73s. 9d. Buyer of Rietspruits, 12s. 6d.

The market opened on Friday with a demand for Zaaipplaats at improved prices. As a set-off, Sakalavas were badly let down, closing at 9s. 9d. sellers. On the call the following alterations in prices were noted:—Sales: African Farms, 10s., 10s. 1d. and 10s. 2d.; Main Reefs, 12s. 6d.; Government Areas, 73s. 6d., and sellers; Modder Easts, 21s. 10½d.; New Elands, 29s. 9d.; Pretoria Cements, £5 12s. 6d.; S.A. Lands, 5s. 11d., and sellers; Van Ryn Deeps, 71s. 6d.; Zaaipplaats, 13s. 9d. Buyers and sellers: Bantjes, 3s. 6d., 3s. 8d.; Knight Centrals, 4s. 3d., 4s. 4d.

	Fri., 1st.	Sat., 2nd.	Mon., 4th.	Tues., 5th.	Wed., 6th.	Thurs., 7th.
African Farms	10 2	9 10	10 6	10 6	10 1	9 11*
Anglo-American Corp.	—	—	—	—	28 9*	28 9*
Apex Mines	7 0+	7 0+	7 0+	7 0+	—	—
Bantjes Cons.	3 0	3 3	3 6	3 9	3 6	3 5
Brakpan Mines	92 6*	92 6*	92 0*	92 0*	93 0*	94 0+
Breyten Collieries	—	11 3*	—	10 0*	10 0*	11 3*
Brick and Potteries	—	5 0*	—	—	5 0*	5 0*
Bushveld Tins	0 6*	0 6*	0 7*	0 7*	0 7*	0 9+
Cinderella Cons.	2 6*	2 9*	2 9*	2 10*	—	1 10*
City and Suburbans	14 0*	14 6	14 0*	14 0	14 3+	—
City Deeps	57 6*	58 6*	59 0	57 0*	57 3*	57 0*
Cloverfield Mines	9 0*	9 3+	9 0	9 2	9 1*	9 0*

	Fri., 1st.	Sat., 2nd.	Mon., 4th.	Tues., 5th.	Wed., 6th.	Thurs., 7th.
Clydesdale Collieries	14 0*	14 0*	13 6	15 6	15 0*	15
Concrete Construction	—	3 6*	3 9*	—	3 9	—
Cons. Langlaagtes	15 3*	15 0*	15 0*	15 3*	15 0	—
Cons. Main Reefs	12 3	12 3*	12 6	12 6*	12 0*	12 3
Cons. Mines Selection	25 0*	26 6*	26 9*	26 6	28 0*	27 0
Coronation Freeholds	0 7	0 7*	—	0 7*	0 8+	0 9+
Crown Diamonds	1 6*	1 6*	—	1 6*	1 6*	—
Crown Mines	36 0+	36 0+	36 0+	36 0+	—	36 0+
Daggafontein Mines	25 0	24 9	24 9	24 9*	24 9	24 9*
Do. Options	9 0+	9 0+	9 0+	8 6+	7 6	7 6
East Rand Coals	—	—	1 11*	1 11*	1 11*	—
East Rand Deeps	—	—	0 9*	—	0 9*	—
East Rand Mining Estates	17 3+	—	—	—	17 3+	—
East Rand Props.	5 3	5 6	5 3	5 0	5 0*	5 3
Eastern Gold Mines	1 0*	1 0*	1 0*	1 0*	1 0*	1 0*
Ferreira Deeps	10 6*	11 0*	12 0*	—	11 0*	—
Frank Smith Diamonds	3 1*	3 0*	3 0	3 0*	3 1*	3 0*
Geduld Props.	40 3	40 9	40 9*	40 6*	40 9	40 9
Glencairns	1 3*	1 3*	1 3*	1 3*	1 3*	1 3*
Glencoe Collieries	—	—	8	8	—	8
Glynn's Lydenburgs	18 0+	18 0+	—	17 6+	17 6+	—
Government Areas	75 9	71 0	72 6	73 0	72 3	73 0
Jupiters	4 9+	4 3*	4 3*	4 9	4 3*	4 3*
Klerksdorp Props.	1 10*	—	1 10*	2 0	2 0+	1 11*
Knight Centrals	4 5	4 3	4 1*	4 0*	4 1*	4 1*
Knights Deeps	5 0*	5 0*	—	5 0*	5 0*	5 0*
Lace Props.	12 9	12 9	13 0	12 6	12 6	12 0*
Leeuwoort Tins	18 3*	18 3	19 3	19 3	18 3*	18 3*
Lydenburg Farms	8 6*	8 4*	8 5*	8 5	8 4*	8 6
Middelvel Estate	1 1*	1 0*	1 1*	1 1*	1 1*	—
Modder B.	159 0*	159 0	159 0	160 0*	160 0	153 0*
Modder Deeps	142 0*	141 6*	142 0*	143 0	143 0	143 6
Modder Easts	21 10½	21 6	21 6*	22 0	21 9	21 6*
Do. Options (3 years)	7 3*	7 3	7 3*	7 3*	7 4	—
Do. Options (4 years)	8 4*	8 5	8 6	8 6*	8 4*	8 4*
Langlaagte Estates	15 0*	15 0*	15 0*	—	—	—
Natal Navigation Colls.	—	19 0*	19 0*	19 0*	19 0*	—
National Banks	—	—	—	272 6*	270 0+	270 0*
New Boksburgs	1 3+	—	1 3*	—	1 0*	1 0*
New Eland Diamonds	30 0*	28 3*	30 0	29 6*	29 0*	28 9*
New Era Cons.	9 6	—	9 6*	10 0+	9 3*	—
New Geduld Deeps	6 4	6 0*	6 3*	6 3*	6 2*	6 3*
New Heriots	27 0+	—	22 6*	26 0+	22 6*	—
New Kleinfonteins	13 3*	13 0*	13 0*	13 0	13 0	13 0*
New Modders	450 0*	453 6*	455 0	456 3*	460 0	457 6*
New Rietfonteins	1 6*	—	—	—	1 6*	1 6*
New Unifieds	4 0*	4 0*	—	4 0*	4 0*	4 0*
Nigels	2 6*	2 6*	2 6*	2 6*	2 6*	—
Nourse Mines	18 3*	18 3*	—	—	18 6*	18 6*
Pretoria Cements	112 6*	112 6*	113 0*	113 9*	117 6	115 0*
Princess Estates	—	—	2 0*	2 0*	2 0*	2 0*
Rand Collieries	—	4 0+	4 0+	3 0*	3 0*	3 0*
Rand Kflips	9 9*	9 6	9 6*	9 9	9 7*	9 6*
Rand Nucleus	1 4*	1 4*	1 5	1 5*	1 3*	1 5+
Rand Selections	86 3*	—	—	—	85 0*	86 0
Randfontein Deep	4 0*	4 0*	4 0*	4 3+	4 0	4 1+
Randfontein Estates	—	—	14 0+	13 0*	13 0*	13 0*
Roberts Victors	—	10 0+	10 0+	10 0+	10 0+	10 0+
Rooibergs	9 9*	9 6+	9 0*	9 0*	9 0*	9 1*
Roodepoort Uniteds	—	—	—	4 0*	—	6 6+
Ryan Nigels	2 9*	2 6*	2 9*	2 7*	2 6*	2 6*
Simmer Deeps	2 8*	2 9+	2 0*	2 0*	2 0*	—
S.A. Breweries	—	—	25 6*	27 0	27 0+	—
S.A. Lands	6 0*	6 0	5 11*	5 11*	5 11*	5 10*
Spring Mines	69 3	68 6*	70 3	70 3	69 0	69 9
Sub Nigels	22 6	22 6*	22 6*	23 3	23 3	23 9
Swaziland Tins	—	—	—	—	25 0*	27 0+
Transvaal Lands	14 6+	—	14 0*	14 0+	14 0+	12 6*
Transvaal G.M. Estates	13 9	14 0*	14 0*	—	13 3*	14 0
Van Ryn Deeps	70 6*	71 9+	71 0*	71 6	70 9*	71 0*
Village Deeps	16 0*	16 0*	16 0*	17 0*	16 0*	16 0*
Withank Collieries	44 6*	44 6*	44 6*	44 6*	44 6*	44 6*
Wit. Deeps	7 3*	7 2*	7 0*	6 6	6 0*	6 6
Wolhuters	5 6+	5 6+	4 9*	5 0	4 10*	5 0*
Zaaipplaats	12 6	12 3	12 11	12 11	12 9	12 9
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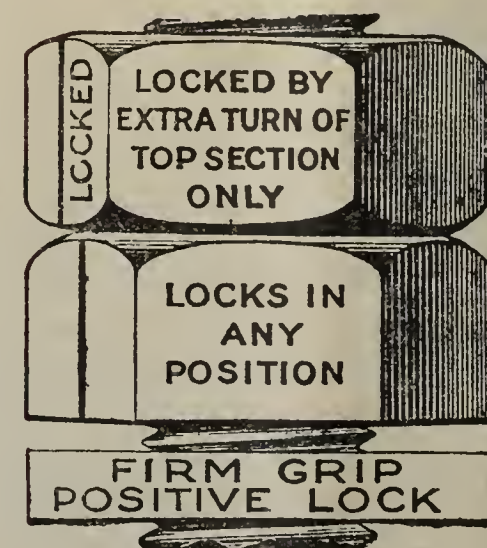
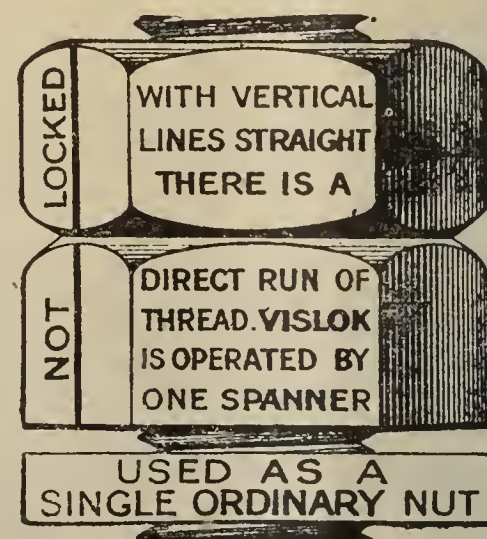
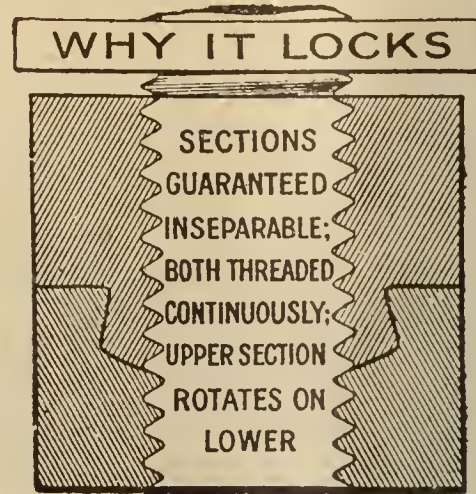
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## THE WEEK IN THE MINING MATERIAL AND ENGINEERING TRADES.

**Business Slack and Disappointing—American Transport Conditions—Paints and Colours—Second-hand Iron and Machinery in Abundance—Base Metal Mines in the Pool.**

On the Commercial Exchange and in outside places business is exceedingly slack; which is all the more disappointing because something better was expected at the commencement of this month. There are various reasons, such as the ever-changing war news. Then the Parliament at the Cape is not coming up to anticipations as regards mining matters, therefore people are not too sanguine about the assistance for the poorer grade mines. The central buying office has not been too liberal of late with their orders, but this was only to be expected until the mining stores are worked down to a lower average of six months' supply. One merchant summed up the position by stating that brokers or merchants did not buy anything unless they saw an opening to place their purchases practically at once, as there was no idea of speculation for the purpose of hoarding. Another reason is the uncertainty of the American shipping and railway positions. A representative of an American shipping house has distributed an extract from a letter from its New York firm. "We are now confronted with a new and very serious condition, which is giving us a great deal of concern at the present time, in the fact that for the time being at least, it will be no longer possible to bring goods into (New York) from the factories without a special Government permit." As per this official statement from the railway traffic managers as follows: "It is vitally essential that there be thorough co-operation in the handling of traffic for overseas shipment, so that the railway equipment which would otherwise be available for fuel, foodstuffs and Government freight, shall not be used in moving traffic which cannot be promptly transhipped when it reaches tide water." "There is now in storage at the seaboard large tonnage awaiting steamship space, therefore it is recommended that shipping companies when contracting for

cargo should give marked preference to the traffic now at the seaboard, rather than book new business from the interior." A firm in town received per the last British mail invoices for goods now on their way per sailing vessels, and these are expected to turn up at any time, but no one will know when until they are at the coast.

### OILS, COLOURS, PAINTS, ETC.

The following are a few extracts from a trade circular published by a leading house in Johannesburg. White lead, oil and turpentine are firm, but stocks are low. A further list of our goods is prohibited, and the situation does not seem likely to improve. Fair quantities of putty and colours in oil have arrived recently. White lead and genuine red lead are 1s. 1d. lb. in 50 lb. kegs; smaller lots, 1s. 3d. lb., but supplies are limited. Linseed oil, boiled and raw, are 15s. per gallon, old measure, and small bottles, 2s. each. Finest putty, 8d. lb. Ready-mixed paints, 1 lb., 1s. 3d.; 2 lbs., 2s. 3d.; 3 lbs., 3s. 6d.; 7 lbs., 7s. 6d.;

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FOR THE

Mine Boys, beg to inform the Mine and Compound Managers that despite the present high cost of flour, the price for this wholesome and very nourishing food has been practically kept at the pre-war level, thus making Macaroni the most economical food of the present times. Owing to the general increase of the prices of all foodstuffs Soup Macaroni has now been introduced into the native diet by a large number of Mining Companies, in whose Compounds the full content of the Boys has been gained by occasionally changing with Macaroni their somewhat monotonous menu.

For quotation and orders please apply to Box 1139, 'Phone 962, Johannesburg—L. FATTI & Co., Ltd.

14 lbs., 15s. It is expected, on account of the oil, white lead, driers, etc., having advanced so high that these paints will experience a further advance; not, perhaps, at present, on account of the big stocks in Johannesburg, but as soon as these are absorbed or reduced substantially. White Italian plaster of Paris, 32s. 6d. per 100 lb. box. Varnishes: Wagon, 27s. 6d.; terebine, 23s. 6d.; patent knotting, 21s.; best pale copal, 25s. 6d.; engine varnish, 31s.; best pale gold size, 27s. 6d.; finest black Japan, 29s. 6d.; best flattening carriage, 27s. 6d.; best hard drying carriage, 30s. 6d.; best pale carriage, 30s. 6d.; finest hard drying body varnish, 37s. 6d.; finest durable body varnish, 37s. 6d.; and extra pale body varnish for white work, 41s., all at per gallon. Muralo, 4s. 3d. per 7 lb. pkt.; Hall's distemper, 6s. per 7 lb. tin; calcite, 4s. 3d. 7 lb. pkt.; granito, 3s. 6d. per 5 lb. pkt., and 60s. per case of 20 pkts. Gold leaf (out of English) transferred, 3s. per book and 105s. per thousand; silver leaf, 1s. 6d. per book. In the steel ceiling, stocks have arrived and the quotation is 75s. to 80s. per square.

### IRON, STEEL AND HARDWARE.

Prices continue the same, chiefly because there is such a dearth of business. If anything, values are just on the easier side without a quotable difference. Steel plates are difficult to gauge, but it is stated that a lesser quotation has been made of £70 per ton f.o.r. Durban to arrive, as compared with about £80 in Johannesburg. However, no one can say if there are any steel plates on the way from America, in fact the information so far is that there are not any, at least none are notified as yet. The engineering shops have not been inconvenienced very much up to the present, as the second-hand plates have been a good substitute. In consequence of the rumour that a cheaper forward quotation has been made for steel plates, an American firm cabled in the early part of the week for a quotation, but up to the

time of writing a reply had not been received. The pipe and pipe fitting trade is experiencing a bad time, although quite good stocks are on hand, particularly in the pipe-fitting department.

### SECOND-HAND IRON AND MACHINERY.

On the whole even the second-hand yards are experiencing poor trade, but values remain very steady for anything like servicable material and machinery, especially all kinds of spares. However, one cannot but help noticing that some of the things in the yards are very much in the submerged side, as many of the parts can hardly be recognised as to what they were originally intended for. An experienced broker states that never in the history of Johannesburg has second-hand material been in such abundance. And now these is the Vogel Deep and a Barberton mine in the market.



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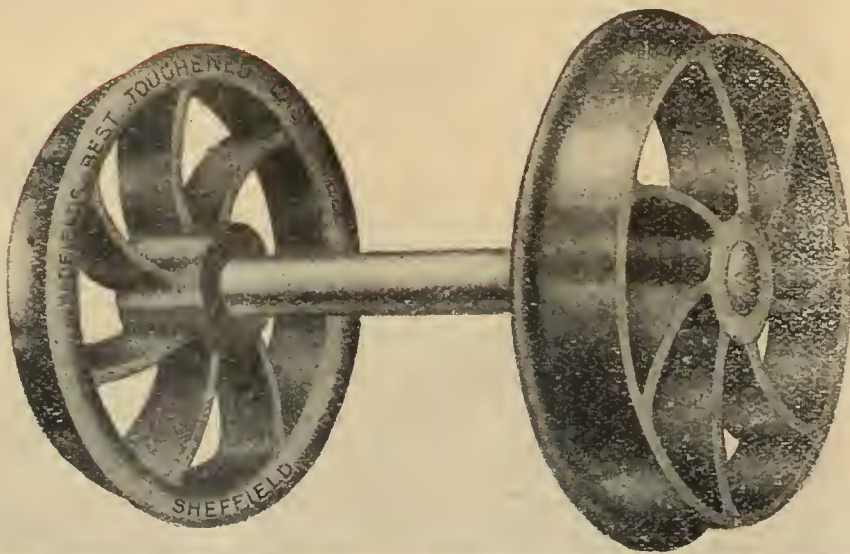
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**TIMBER AND BUILDING MATERIAL.**

Another small rise has to be noted this week in deals, as the price is now from 1s. 7½d. to 1s. 8½d. per foot, floorings are 10½d. and ceilings 5½d. to 6d. The only explanation is that the contracts offered to our merchants from Sweden are now at such a price for the original cost of timber, followed on by increased freight and incidental charges that deals cannot be landed in Johannesburg under 2s. per foot, and importers are shy in closing with these terms, hoping that they will be modified. The fact is that such values mean that two-thirds more capital is required to cope with the present conditions as compared with pre-war times, and the timber trade represents big money at any time, as the import bills have to be met promptly and then the builders and contractors are allowed so much credit. There is another difficulty in giving quotations for timber and the many etceteras for any specified contract, as hardly any firm has complete stocks, therefore estimates have to be made for certain lines not on hand. In a recent case a timber firm had to pay 37s. 6d. for doors which they contracted to supply at 27s. 6d. each—these are the tantalising small things that the tenderers have to put up with. In one case, soon after the war, a firm lost several hundred pounds over a big contract, which no one however could be blamed for. The price of galvanised roofing iron is said to be easier, but so far there has been no falling off, but rather there is a better demand now tiles cannot be obtained under two months or so for new orders.

**PRICES ENQUIRED FOR.**

Several queries, more than usual, came into our office during the week and it has been no easy matter to give definite answers, chiefly because of the shortage of the special lines asked for, and further holders when they know the actual state of the market, are not always ready to give information, with the chance of spoiling their business, especially in such times as these. One question was the price of carbide, which is now a very scarce commodity in Johannesburg. The information is that three weeks ago a

sale of a decent parcel was made at 110s. per 100 lbs., but now a firm which has only a small quantity on hand will not sell under 115s. A quotation was wanted for paraffin wax when it was discovered that a parcel of 5 tons recently changed hands at 8½d. lb., but for smaller quantities the price is from 9d. to 1s. lb. The price for naphtha was asked for, and after much enquiry it was ascertained that it might be crude naphtha; however, it was subsequently ascertained that crude petroleum was wanted for a Rhodesian railway, but so far the order for 8,000 gallons was still unplaced and in the meantime a price was not obtainable. Lubricating oil was a more easy matter as a good average one can be had at 37s. case of 2-4s. Another attempt was made to gain the true particulars about tar, but the firm which has been offered a quantity, in writing, at 1s. per gallon will not disclose particulars at present; however, it can be stated that the tar offering, presumably from a colliery, cannot be definitely negotiated for because the recent floods in that part of the country placed several of the pits under water.

**THE BASE METAL MINES IN THE POOL.**

When the pool for mining material and stores was arranged it included the gold mines, collieries, and the Premier diamond mine. From time to time reference has been made in these notes to the difficulty experienced by the base metal mines in obtaining supplies through the medium of priority certificates granted by the Government Mining Engineer. Naturally, the Chamber of Mines, with their own offices in London and the South African High Commissioner at their elbow, figuratively speaking, have used their combined influence with the "man on the spot" to the best advantage. The outside mines (copper, lead and tin) recognising this advantage, have, after repeated applications, been allowed to join up with the pool, which obviously must be to their benefit as regards obtaining essential supplies. On the face of it, it means more concentrated buying, therefore less competition, but so far it has been generally recognised that the pooling system was one of those things absolutely forced upon the mining industry through the strenuous war conditions and now one seldom hears any complaints, but rather a consensus of opinion that it was perhaps the only way to meet an extraordinary position.

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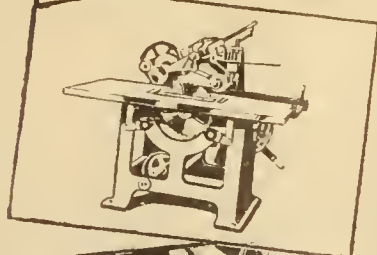
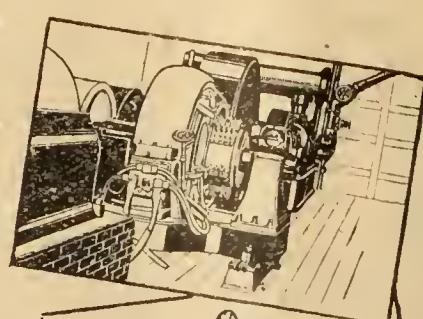
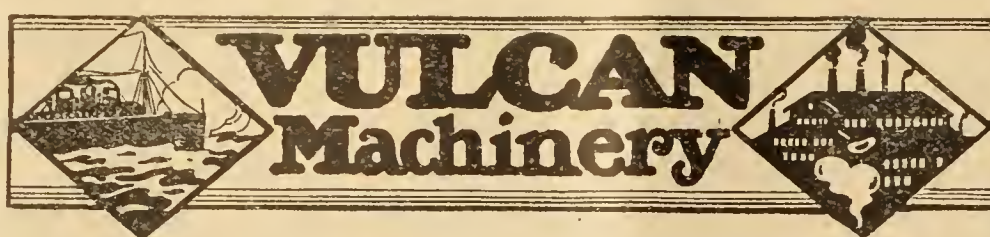
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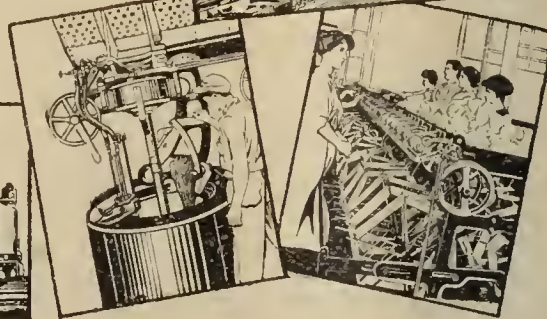
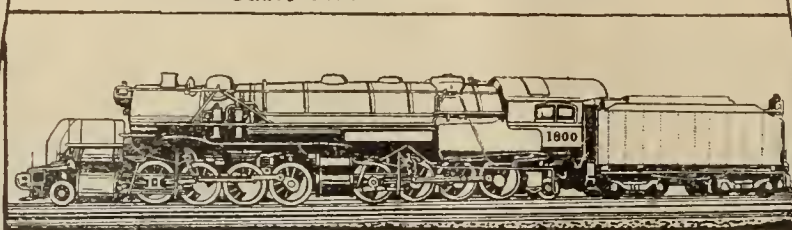
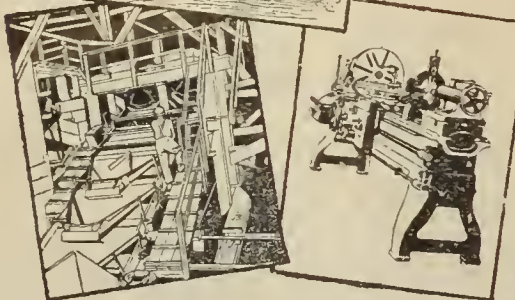
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## Anglo-French (Transvaal) Navigation

**COAL ESTATES, LIMITED.**

(Incorporated in the Transvaal.)

### NOTICE TO SHAREHOLDERS.

NOTICE is hereby given that the Sixteenth Ordinary General Meeting of Shareholders in the above-named Company will be held in the Board Room, Fourth Floor, National Bank Buildings, Simmonds Street, Johannesburg, on THURSDAY, the 18th day of April, 1918, at 10.30 a.m.

#### BUSINESS.

1. To receive and consider the Statements of Accounts and the Reports of the Directors and the Auditors for the year ended 31st December, 1917.
2. To elect Directors in the place of Mr. Wm. Dalrymple and Capt. B. Hansford, C.B., who retire in terms of the Company's Articles of Association, but who are eligible and offer themselves for re-election.
3. To appoint Auditors for the ensuing year, and to fix the remuneration for the retiring Auditors, Messrs. F. W. Diamond and English, and Samuel Thomson.
4. To transact all such other business as may under the Articles of Association be transacted at an Ordinary General Meeting.

By Order of the Board,

L. S. RAYMOND,

Secretary.

Head Office:  
National Bank Buildings,  
Simmonds Street, Johannesburg.  
4th March, 1918.

## APEX MINES, LIMITED.

(INCORPORATED IN THE TRANSVAAL.)

### Notice to Shareholders.

NOTICE IS HEREBY GIVEN that the Twenty-first Ordinary General Meeting of Shareholders in the above-named Company will be held in the Board Room, Fourth Floor, National Bank Buildings, Simmonds Street, Johannesburg, on THURSDAY, the 18th day of APRIL, 1918, at 11 a.m.

#### BUSINESS.

1. To receive and consider the Statements of Account and the Reports of the Directors and Auditors for the year ended 31st December, 1917.
2. To elect Directors in the place of Messrs. Wm. Dalrymple and G. C. Fitzpatrick, who retire in terms of the Company's Articles of Association, but who are eligible, and offer themselves for re-election.
3. To appoint Auditors for the ensuing year, and to fix the remuneration of the retiring Auditors, Messrs. F. W. Diamond & English and A. E. Page.
4. To transact all such other business as may under the Articles of Association be transacted at an Ordinary General Meeting.

The Transfer Register of the Company will be closed from the 17th day to the 23rd day of April, 1918, both days inclusive.

By Order of the Board,

L. S. RAYMOND,

Secretary.

Head Office:  
National Bank Buildings,  
Simmonds Street, Johannesburg.  
4th March, 1918.



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### VARIOUS TRADE ITEMS.

Benzol is said to be unobtainable in town. The men who work rubber into manufactured articles have very little on hand, with poor prospects of obtaining new supplies, therefore they are conserving all for their own use. The motor trade is said to be suffering, as there is still an uncertainty about supplies of petrol and again the quietude of the town as regards general trade has not escaped its shrinking influences in the motor garages. Four tons of South African arsenic have been secured by an East London firm of sheep dip manufacturers. Ammonia for refrigerating purposes: A Johannesburg firm has produced Liq. Ammonia Fort. (specific gravity 0.88) from all raw materials produced in South Africa. Further particulars are anxiously awaited, as every new industry is ever welcomed.

### REVISED PRICE LIST.

**BUILDING MATERIALS.** Timber: Deals, Baltic, 9 x 3, 1s. 7½d. to 1s. 8½d.; flooring, 4½ x ¾, and 6 x ¾, 10d. per square foot; flooring, 4½ x 1½, 10½d.; and 6 x 1½, 10½d.; ceilings, 6 x ½, 6d. per square foot; pitch pine, 8s. 6d. per cubic foot; Oregon, 7s. to 8s. per cubic foot; clear pine, ½ in. x 12 in., 1s. 3d. per foot; 1 in. x 12 in., 1s. 6d.; teak, 17s. 6d. to 18s. 6d. cubic foot; shelving, 1s.; jarrah, 12s. 6d. cub. ft.; poplar, 1 in. x 12 in., 1s. 6d.; scantling, 1s. 7d. to 1s. 8d. ft. beaver boards, 5½d.; galvanised iron, 24-gauge, 6ft. to 10ft., 1s. 10d.; 11ft., 1s. 10½d.; 12ft., 1s. 11d.; 26-gauge, 6ft. to 8ft., 1s. 8d. to 1s. 9d.; 9ft. and 10ft., 1s. 9d.; flat galvanised, 24-gauge and 26-gauge, 100s. 100lb.; floor brads, 52s. 6d.; ceiling, 47s. 6d.; wire nails, 47s. 6d. to 60s. 100lb.; locks, rim, 66s.; mortice, 70s. per dozen; steel ceilings, 75s. to 80s.; roofing material, 1 ply, 40s.; 2 ply, 47s. 6d.; and 3 ply, 57s. 6d. per roll.

**BRICKS, CEMENT, LIME, ETC.**—Pretoria Portland Cement, 9s. 3d. bag; 8s. 3d. truck loads; lime, white, unslaked, 7s.; truck loads, 6s.; slaked, do., 5s.; blue, 3s. 9d.; plaster line, 4s. 6d.; bricks, stock, delivered, 67s. 6d. to 70s.; wire cuts, 70s. to 75s.; pressed, 70s. to 80s. 1,000; road transport expensive when obtainable; salt glazed £15½, and white bricks, £35 per 1,000; roofing tiles, £17½ to £27½ per 1,000; glazed tiles, 17s. 6d. to 27s. 6d. per yard; paving cement tiles, 8s. 6d. per yard laid; reinforced concrete columns, 6ft. plain, 25s.; fluted, 30s.; fireclay bricks, £8½ to £11½, at kiln, per 1,000; clay chimney pots, 36s. to 70s., according to height, 12 in. to 18 in., per dozen.

**OILS, PAINTS, LEAD, OXIDE, GLASS.**—Linseed, raw and boiled, 14s. to 14s. 6d. per gall.; white lead, 1s. 3d. per lb. and 1s. 1d. in big lots; turpentine, 67s. 6d. 2/4 1-5 galls.; 10/1 5-6 imp. tins. 73s.; oxide in oil, 50s. per 100 lb.; dry oxide, 16s. to 16s. 6d.; linseed oil putty, 8d. per lb.; paints in tins, 1s. 3d. lb.; British plateglass, ¼ in., 6s. to 6s. 6d.; do., mirror, 6s. 6d.; window, 16oz., 1s. to 1s. 6d. per foot; and fancy glass, 2s. per foot.

**GREASE.**—Imported, A.F. axle, £35; local, £26½ to £27½ per ton; tallow (local), 8d. per lb.; White Rose paraffin, 19s. 4d. 2/4 Laurel paraffin, 19s. 1d.; petrol, 35s. 6d. to 36s. 6d. 2/4 I.M.P.; motor oil, 7s. to 7s. 6d. per gallon; engine lubricating oils, 35s. to 45s. per case; cylinder, 35s. to 45s.

**CHEMICALS.**—Mercury, £40 75lb.; bichromate potash, 5s. 6d. lb.; chlorate, 4s. 6d. per lb.; permanganate, 12s. 6d. per lb.; alum, 6d. lb.; carbolic acid, 7s. 6d. lb.; borax, 110s. 100 lbs.; cyanide sodium, 2s. to 2s. 3d. per lb.; hypo, 9d. lb.; nitrate lead, local, 46s. 100lb.; litharge (assay), 70s. to 72s. 6d. (commercial), 58s. 6d. 100 lbs.; zinc sheets and blocks, 1s. 9d. lb.; locally smelted zinc, 6½d. lb.; plumbago crucibles, 5d. per number; carbide, 112s. to 115s. 100lb.

**ELECTRICAL GOODS.**—Lamps, high volts, British, Holland and American, 30s. to 36s. wholesale, and 48s. to 54s. doz. retail; carbon lamps, 18s. dozen; pure rubber flex, 6d. to 8d. yd.; 3 20 coils wire, 42s. 6d. to 45s.; ditto, 3 22, 27s. 6d.; 7 22, 60s.; 7 20, 80s.; 7/18, 105s.; tubing, 23s. to 25s. per 100 feet; keyholders, 4s. 6d. to 5s. 6d. each; round blocks, 3½ in., 5s. 6d. to 6s. dozen; lamp holder cord grips, 13s. 6d. to 15s. per dozen; switches, 5 amp., 42s. to 48s. per dozen; British glass shades, 30s. to 40s. dozen; porcelain shackles, 15s. to 18s. dozen; do., bobbins, 15s. to 25s. per 100; cleats, 22s. per 100; P.O. insulators, 18s.; motor, 3 h.p., about £35 to £37, new.

**IRON.**—Imported, ¼ in. and ½ in. round, 9d. to 10d. lb.; ¼ in. round, 67 to 70s. 100lb.; ½ in., 66s.; ¾ in. round, 47s. 6d. to 50s. 100lb.; 1 in. up. round, 35s. to 40s. per 100lb.; square iron, 35s. per 100lb.; flat iron, small shoeing sizes, 45s. to 50s.; flat, average width and thickness, 36s. to 40s.; round iron, local, ¼ in. upwards, 33s. 6d. per 100lb.; square iron, local, ¼ in. upwards, 33s. 6d. per 100lb.; flat iron, average widths and thickness, 33s. 6d.; mild steel bar, 6½d. to 9d. per lb.; drill, 10d. to 1s. per lb.; steel plates, 70s. to 80s.; many sizes unobtainable; hexagon and cuphead bolts, ¼ in. diameter, 2s. per lb.; 5-16 in. diameter, 1s. 9d. per lb.; ¾ in. diameter up to 3 in. long, 1s. 9d. lb.; ¾ in. dia., 1s. 6d., 3½ in. and up long 1s. 6d. lb.; ½ in. dia. up to 2½ in. long, 77s. 6d. 100lb.; ½ in. dia. and 2½ in. up long, 75s. per 100lb.; ¾ in. diameter up to 2½ in. long, 75s. per 100lb.; ¾ in. dia. 2½ in. and up long, 57s. 6d. per 100lb.; ¾ in. diameter, 2½ in. and up long, 55s. 100 lb.; ¾ in. and 1 in. diameter, same price as ¾ in. diameter; nuts, ¾ in., 1s. 3d. per lb.; ½ in., 82s. 6d.; ¾ in. to 1½ in., 75s.; 1½ in. and 1½ in., 85s.; 1½ in. to 1½ in., 87s. 6d.; 2 in. up, 92s. 6d.; washers, all sizes, 50s.; rivets, 3-16 in., 1s. 6d. lb.; ¼ in., 5-16 in., 1s. 6d. lb.; 7-16 in., ¾ in., 1s. 3d. lb.; ½ in., 75s.; ¾ in., 65s.; ¾ in. up, 60s. 100 lb.; shoes and dies, 32s. 6d. to 35s., 100lb.; rails, £25 per ton; picks, 4lb., 40s. per doz.; shovels, 65s. to 70s. per doz.; drill hammers, 5½d. to 6d. per lb.; hammer handles (best American), 14in., 4s. 6d.; 24in., 10s.; 30in., 14s.; 36in., 16s. 6d. per dozen; metal, anti friction knoxite, 11d. to 1s. and special prices per lb.

In consequence of the daily, and even hourly, variation in prices, the Editor will answer reply-paid telegrams to verify any quotation in our list.

Royal warrants amending the rules governing the award of the Albert Medal, for mariners, and the Edward Medal, for life-saving in mines, quarries, or other industrial employment, appear in the *Union Gazette* of January 11.



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## Company Meetings.

### FERREIRA DEEP.

#### THE YEAR'S RESULTS.

##### Labour Position.

The sixteenth ordinary general meeting of shareholders in the Ferreira Deep, Ltd., was held on March 7th at the Corner House. Mr. Max Honnet presided, and there were also present Messrs. H. A. Rogers, H. W. Thomas, J. Munro, P. Richardson, A. F. Mullins, S. C. Steil, A. Sprinz and C. Meintjes. There were represented 577,079 shares out of 980,000.

The Chairman, in moving the adoption of the report and accounts, said: During the twelve months ended 30th September last, with which the report and accounts before you deal, the mine has suffered from a marked shortage of native labour. This, combined with the decreasing points of attack in the western area owing to exhaustion of the reefs, led to a considerable reduction in the scale of operations, the ore milled being less by some 57,000 tons than during the previous year. Considering all existing conditions, the increase of only 4d. per ton in the working costs must be considered satisfactory, while the decrease of 2s. 6d. per ton in the recovery is such as must be expected with the increasing proportion of ore being mined from the poorer eastern half of the property. The working profit of just under £334,000 is less by £124,695 than that of the previous year. Allowing on the one hand for sundry revenue and on the other for donations, contributions to the Phtbisis Fund, and slight further depreciation in the Transvaal 3 per cent. Stock since sold, the net profit for the year was £333,667. Credit was taken in the appropriation account for £7,934, the proceeds of equipment sold. Two dividends, aggregating £281,750, were declared, and £41,841 were paid in Government taxes, the balance carried forward being £135,477, which includes £10,000 of British War Loan purchased at the issue price of 95 per cent. During the current year £34,824, of which £34,627 are in 5 per cent. Union Bonds, have been received under the provisions of the Bewaarplaats Moneys Application Act, and approximately £43,000 have yet to be received over a period of twelve years. As usual, the reports of the consulting engineer and acting manager give a full account of the year's work underground. A number of earth tremors were experienced, but no serious accidents occurred in the shafts or stopes, though there were frequent minor interruptions to work.

##### Future of No. 1 Shaft.

No. 1 shaft, through which 70 per cent. of the ore for the mill is now normally hoisted, has been a cause of constant anxiety, especially during the past few months, when hoisting has had to be stopped on several occasions. During January last there was complete stoppage for 16 days, with the result that the profit for that month was reduced to £1,563. While it is clearly unwise to attempt to make any definite statement in regard to future operations in this shaft, it can at least be said that our technical advisers consider that it is now reasonable to hope that the measures adopted for the relief of pressure on the shaft will shortly end the danger of anything in the

nature of a serious collapse. Owing to lack of delivery of the necessary machinery, no alterations were made in the hoisting arrangements at No. 2 shaft; fortunately, owing to the very fair condition of this shaft throughout the year, there has been no actual necessity for making any change. The development footage showed the contraction to be expected, as only subsidiary and exploratory development now remains to be done. Generally speaking, better grade was exposed during the year, but the ore completely developed was decreased by some 77,000 tons, and was of considerably lower value than that developed during the previous year. As was anticipated, the ore reserves show an appreciable reduction in tonnage and value, being at the close of the year 1,395,500 tons, of an average value of 7.6 dwt. About one-third of this tonnage, and that of a higher value, is temporarily locked up in shaft and boundary pillars. The broken ore packed in stopes, which is additional to these reserves, has been increased on a conservative estimate to over 310,000 tons. As you will notice, in order to provide efficient support to the hanging wall, more than half of the area stoped during the past year was covered with these reef packs, naturally at very considerable cost.

##### Labour Position Improving.

The labour position is again improving somewhat after a long period of depression, but it is unusually late in the season for this improvement to be shown. The results for the five months since the close of the year have been more or less normal except for the month of January, when, as previously stated, the profit fell to the low figure of £1,563, due to cessation of hoisting operations. No stoppages took place during February, and the profit, you will have seen, returned to the more usual level of £16,500. An investigation is at present in progress as to whether any transfer of plant from the outcrop to the deep reduction works is justified, so as to admit of an earlier closing down of the former. A similar investigation was carried out last year which resulted in showing that it was then too early to entertain such a policy, owing both to the cost involved in the transfer of the necessary plant to enable a continuance of the scale of operations then still possible, and to the loss of crushing entailed during the removal and re-erection of the various units of the plant, which would have taken a number of months to effect. The monthly rate of crushing averaged for last financial year just under 49,000 tons, while the Deep plant is capable of treating a monthly tonnage of 35,000 to 36,000 with maximum metallurgical efficiency: when omitting January, which was abnormal owing to hoisting interruptions, the crushing since October last has averaged 44,000 tons for the current year to date, so that it will be seen that we are still working at a scale considerably in excess of the present capacity of the Deep plant alone. It must be remembered that these figures have proved attainable in spite of the intermittent shaft interruptions experienced in No. 1 incline, and during a period of exceptional shortage of natives; but for these factors a considerably greater scale of operations would have been possible. It must also be

remembered that though the points of attack in block ground are decreasing fast, the large tonnage of packs in the mine become increasingly more available as blocks of ore are exhausted and areas of the mine can be abandoned.

##### Overdue Machinery.

In any event a further reduction in the scale of operations and profit earned must be anticipated before the end of the current year. When the hoisting machinery for No. 2 shaft, now long overdue, is delivered from England and has been installed, the upper shaft pillars at this incline will be released for stoping; and as there are good tonnages of high grade ore in these pillars they will have their effect on maintaining tonnages and values longer than would otherwise be possible. I am glad to be able to report that all the more important parts of this machinery have now been delivered and only minor portions have still to come to hand. It is with deep regret that we have to draw your attention to those further employees of the company who have lost their lives in the service of their country. In Colonel Trump, D.S.O., our late manager, Lieut. Rockey, late mine secretary, and the others named, the company and the community have lost those who can ill be spared. Mr. Selby, who, as you are aware, has acted as manager for a considerable period, has now been appointed manager. He and his staff, owing to the condition of the mine, are continually subjected to great strain and anxiety, and our thanks are due to them for the manner in which they have carried out their duties. I beg to move that the report and accounts for the year ended 30th September, 1917, be received and adopted.

The report and accounts were adopted.

Mr. E. A. Wallers and Mr. H. A. Rogers were re-elected directors, and Mr. Samuel Thomson and Messrs. C. L. Andersson and Co. were reappointed auditors.

### WELGEDACHT EXPLORATION CO., LTD.

The 16th ordinary general meeting of this company was held at Salisbury House, London Wall, E.C., on January 10, 1918.

Mr. L. R. Davies, J.P., acting chairman, presided, and, in moving the adoption of the report and accounts, said: I have to apologise for the absence of the chairman of the company, Mr. Hamilton Carvill, who, owing to ill-health, has had to leave London for a time. In regard to the annual report and accounts for the year ended June 30, 1917, I propose, with your permission, to take them as read. Comparing the figures of the balance sheet before us with those of the previous year, it will be noticed that the paid-up capital of the company, the general reserve account and rents receivable in advance, are unaltered. Sundry creditors are £700 less, but this is a fluctuating item which does not call for explanation. Unclaimed dividends are nearly £1,500 up, owing to questions arising in connection with enemy shareholdings, which are now in course of adjustment. The balance of appropriation account, £9,500, gives us over £500 more to deal with than we had last year. On



the other side of the balance sheet, after allowing for depreciation of new coal shaft connections, our property and equipment account has increased by more than £1,600. Sundry debtors show an increase of over £1,000, and like sundry creditors is a fluctuating item requiring no comment. The same remark applies to stores on hand which have decreased by about £1,000. Shares account remains unaltered at £757. A new item, gold shaft and other expenditure, £1,925, appears, which is self-explanatory. Payments in advance are higher by under £50. Our cash assets have been decreased by £7,300 odd, a difference which is accounted for by the expenditure on new works as shown in the accounts and reports. Turning to the expenditure and revenue account, as we have during the year improved our coal output by over 23,500 tons, the items on both sides of the account necessarily disclose corresponding expansion. Maintenance charges on our railway and plant have been exceptionally heavy, nearly £2,000 in excess of the sum expended under this heading in the previous year, and I am afraid with continually rising wages and cost of material, no reduction can be looked for at present in this direction.

#### EFFICIENT AND ECONOMICAL WORKING OF THE PROPERTY.

I will not trouble you with further detailed comparisons of these figures, but I think you will agree that, taken as a whole, they show satisfactory results, and bear testimony to efficient and economical working on the part of our engineer, mine manager and staff. While it is true that our working costs have gone up 2 4-5d. per ton, or, say, 5 per cent., yet when due consideration is given to the adverse conditions prevailing during the period under review, I consider that we have reason to congratulate ourselves on the successful outcome of the year's operations. The causes which have contributed to the rise in costs are higher prices of all stores and supplies, increased wages and bonuses due to the war, and also the fact that the first half of the year was more or less a transition period, when the transfer of operations from the old to the new shaft had to be effected, involving extra work, expenditure, and delay. While war conditions prevail no improvement in costs can be expected; in fact, we must be prepared, in all probability, to face still further decreases in the near future. On the other hand, it is highly satisfactory to note the marked enhancement of our revenue, which has all but kept pace with the rate of increased expenditure, and I trust that the current year may display equally encouraging results. The items of the profit and loss account exhibit no material changes, with the exception of the sum of £518 charged to depreciation of new shaft, while interest received from loans is nearly £400 less. The latter is due to a reduction in the rate of interest and to the repayment of some of the loans. Since the outbreak of war over £21,500 of these loans have been paid off, and while this is gratifying as evidence that prudence was exercised in selecting stable borrowers and adequate securities, on the other hand these re-payments cannot be reinvested to yield as high a rate of interest as before, consequently the company's income from this source has been and is being steadily reduced. The appropriation account shows that, after adding the net profit for the year ended June 30 last to the amount carried forward from the previous year's account, we have a disposable balance of £9,500 odd in hand.

#### DIVIDEND OF 9D. PER SHARE.

From this we propose to pay the shareholders a dividend of 9d. per share on the 31st inst., which will leave £3,622

6s. to be carried forward to the current year's account. You will have gathered from the board's annual report full information as to the course of the year's events and operations, and you will doubtless now wish to hear such further news of importance as has since reached us from South Africa. The profits for the first half of our financial year exceed £1,000. The output of coal for the first four months of the year was 60,167 tons, and during the same period nearly 53 million gallons of water were pumped under our contract with the Rand Water Board. Our last advices by letter reported an exceptionally heavy rainfall, causing serious floods in the Welgedacht district, and a more recent cable states that colliery operations had been temporarily restricted owing to subsidence, which, presumably, is more or less due to the floods mentioned. This has caused material diminution in the output and profit for November and December. You will, perhaps, remember that at our last meeting I referred to the interest which was then being displayed in East Rand gold mining properties. This interest led to substantial investments of capital for developing several of these propositions, while indications were not lacking of further financial support, until the momentous change in the military position took place as the result of the Italian disaster and the apparently final withdrawal of Russia from the Allies. Up to then the hope had been generally entertained that 1917 would be the final year of the war, and doubtless this expectation encouraged capitalists to look round for promising after-war ventures. The effect of the crucial events mentioned has been a far-reaching that new undertakings in the Eastern Rand can scarcely be looked for while hostilities continue. It was understood that investors in America were favourably considering the question of financing such propositions, but it has become more apparent every day that all the resources of that country will be required in order to effectively make up for the defection of Russia and secure the enemy's defeat. While the immediate outlook is not as clear or encouraging in this connection as we could wish, my colleagues and I are inclined to the opinion that with the return of peace and more normal conditions public interest in the Eastern Rand will revive, and capital will again be forthcoming for prospecting and developing gold mining properties of promise like Welgedacht.

Mr. Thomas F. Dalglish (director) seconded the emotion, and it was carried unanimously.

The retiring directors, Messrs. A. H. D. Cochrane and T. F. Dalglish were reappointed, as were also the auditors, Messrs. Douglas Low and Co., of Johannesburg, and the proceedings terminated.

#### SWAZIELAND CORPORATION, LTD.

The 19th ordinary general meeting of the Swazieland Corporation, Ltd., was held at Threadneedle House, 34 Bishopsgate, London, E.C., on Thursday, January 17, 1918. Mr. C. F. Rowsell (chairman of the corporation) presided. Mr. W. G. Brown (secretary) read the notice convening the meeting and the report of the auditors.

The Chairman said: Gentlemen, I presume you will take the report and accounts as read, as usual. Before dealing with the position of the company, I will just briefly refer to the accounts. Taking first the profit and loss account, the items are very much the same as last year, as everything had then been done to cut down our expenses to the lowest possible level consistent with maintaining our interests. The result of the profit and loss account is that we carry to the debit of that account £1,567. This is chiefly due to the rentals, which are payable in re-

spect of our land and mineral areas, and to the depreciation which we have written off buildings, plant, furniture and live stock. I think there is nothing in the balance sheet that has altered materially to which I need refer. Coming now to the position of the company, you will no doubt recollect that our holdings in Swazieland are on a very substantial scale, consisting as they do of 641 square miles of mineral areas and 75 square miles of land areas. But those who have followed the position of affairs in South Africa generally will not need to be reminded of the difficulties which even the well-established gold mining companies in that country are having in carrying on their business. It is, therefore, not surprising that we have been unable to take any step during the year towards attempting to secure the necessary finance to develop our properties, or to carry on anything more than on merely preservative lines. Your manager in Swazieland, Mr. Allister Miller, has, as usual, given the closest attention to our business, and has done his best to maintain everything intact, and I hope that when the time comes that we are able to see ahead a little more clearly, we shall be able to start without having had our interests materially injured by the war. I do not think I have anything further to add, except that it will interest you no doubt to learn that our secretary, Mr. Aspling, has joined the East African Field Force, and is, I believe, at the present time with that force in Portuguese Nyassa, where the remnants of the German forces are still giving a little trouble. I beg to move the adoption of the report and accounts, and I will ask Mr. Hird to kindly second it. The resolution was then put to the meeting and carried unanimously.

#### AFRICAN BANKING CORP., LTD.

The 18th ordinary general meeting was held on January 24 at Winchester House, Old Broad Street, E.C., the Rt. Hon. the Earl of Selborne, K.G. (the chairman), presiding. The Chairman, in moving the adoption of the report and accounts, said: If you will turn with me to the balance sheet I will briefly run over the figures with you. The cash is £1,730,072 16s. 11d., or about £172,000 more than last year. It is really larger than we care to see, and is caused partly by the difficulties exporters have of getting shipping for export of produce from South Africa. Securities are £784,313 14s., or about £130,000 lower than last year, and this has been caused by sales in the ordinary way. Securities are taken in at market valuations, all depreciations having been fully provided for. Bills of exchange are £2,069,616 17s., or about £782,000 up. This is partly accounted for by the increased cost of South African export and also because—the liquid position being so strong—all our bills were in hand and we had no rediscounts. Bills discounted, loans, and advances are £3,449,185 19s. 10d., or about £11,000 less. This is merely a nominal fluctuation. Acceptances, etc., are £176,352 16s. 5d., or £191,000 less, which is also accounted for by the fact that we had no rediscounts. That, ladies and gentlemen, is the asset side of the balance sheet, and it shows a strong liquid position. If you reckon the percentage, you will see that our cash and securities equal over 37 per cent. of our deposits on the other side, and if you include also the bills of exchange, which are maturing from day to day, you get over 68 per cent. If you will now look at the liability side you will see that our capital remains at £600,000. The reserve is up to a quarter of a million, as we are able to put £30,000 this year, as against £10,000 last year, to the credit of this is a good sign of a more active circulation of paper



money, and indicates an economy of the use of specie. Deposits, etc., are £6,722,172 10s. 1d., or an increase of about £986,000, and this is very practical evidence of an increasing and expanding business. Drafts issued, etc., are £258,581 9s. 1d., or about £19,000 down. Rebate is £22,722 1s. 2d., or £1,100 more than last year, accounted for by more rebate on the increased bills we have dealt with. The total figures of the balance sheet are £8,411,926 7s. 9d., and they bear convincing evidence to the growth and extension of our business; they also indicate the soundness and expansion of the commercial and agricultural position of South Africa, notwithstanding the ravages in other parts of the world caused by the War. If you will now look at the profit and loss account you will see that the increase of our business has naturally yielded better results. The gross profits, after deducting interest on deposits and bonus to staff, and providing for income tax and all bad and doubtful debts, are £274,916 6s. 7d., as against £234,252 18s. for last year, an increase of £40,693 8s. 7d. If you add the balance brought in from last year the total is £303,789 0s. 1d. Allowing for charges, rebate, appropriations to staff fund and depreciation of furniture, also for the £30,900 I have already mentioned as being credited to reserve, there remains a balance of £73,740 8s. Out of this an interim dividend at the rate of 7 per cent. per annum was paid in July, and we now pay a further dividend at

the rate of 8 per cent. per annum, making  $7\frac{1}{2}$  per cent. for the year, and we carry forward to next account the balance of £28,740 8s., and that, I venture to think, ladies and gentlemen, is a satisfactory state of affairs.

### BWANA M'KUBWA COPPER MINING CO., LTD.

The ordinary general meeting of this company was held at Salisbury House, London, E.C., on Monday, December 31, 1917. Mr. Robert Littlejohn (the chairman of the company) presided, and, in moving the adoption of the report and accounts, reminded the Shareholders that at their meeting a year ago he stated as regards the proposed treatment plant to deal by a leaching and electrolytic process both the higher and the lower grade ores of the mine, that plans and specifications were completed, but that owing to war conditions it was difficult—impossible practically—to get any reliable firm in this country to tender for the construction and erection at the mine of such a plant and they, therefore, proposed to get tenders from the United States for a unit of the plant, even at the higher cost as compared with pre-war prices, and that arrangements would be completed without delay for the further finance necessary in that connection. But, as they all knew, America decided early in the year to come into the war in asso-

ciation with the Allies, and since then it had been as impossible to get such plant constructed there and erected at the mine by any reliable makers in America—or elsewhere, for that matter—as by makers in this country. In those circumstances they had abandoned for the present the idea of acquiring and installing the proposed leaching and electrolytic plant, and, of course, they had also abandoned for the present the relative financial arrangements. During the past year their operations had been continued on the old lines—the mining and concentrating of the higher grade ore and the shipment of the concentrates to this country for realisation—with the results as set forth in the report and accounts now presented. Since the close of the financial year an important advance had, he thought, been made in that connection. In August last the Minerals Separation Co., undertook trial tests on Bwana M'Kubwa ore in London by a process which they were informed would be applicable to the lower as well as the higher grade ore. Those tests yielded sufficiently good results to justify this company—on reasonable terms as to royalty and otherwise being arranged—erecting at the mine at least a working unit of the plant required to operate the process and capable of dealing with 100 tons of ore a day.

Mr. Alexander Stewart, M.I.C.E. (Director), seconded the motion which was carried.

The retiring director and the auditors having been re-elected, the proceedings terminated.

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# NEW STATE AREAS, LTD.

## Offer of 150,000 Shares at par by Messrs. Barnato Bros.

THE JOHANNESBURG CONSOLIDATED INVESTMENT COMPANY, LIMITED, on behalf of Messrs. Barnato Bros., of Consolidated Building, Johannesburg, hereby offer to sell at par One Hundred and Fifty Thousand (150,000) Shares of £1 each, fully paid, in the NEW STATE AREAS, LIMITED.

The NEW STATE AREAS, LIMITED, is a Company, incorporated on the 20th day of February, 1918, with liability limited by Shares under the Companies Act, 1909, of the Transvaal Province.

The Company has a capital of £1,500,000. The whole of the capital was underwritten at par by Messrs. Barnato Bros. and has now been privately subscribed and allotted.

300,000 Shares have been paid in full.

1,200,000 Shares have been paid for, as to two shillings (2/-) a share in cash, and the balance of eighteen shillings (18/-) a share is payable as and when required by the Company.

150,000 Shares out of the 300,000 Shares, which are fully paid, are now offered for sale at par by Messrs. Barnato Bros.

**Applicants must apply for ten, or multiples of ten, Shares.**

All applications for Shares are to be accompanied by a remittance in Cash, or by a Cheque, Bank Draft, or Post Office Order, payable to the Johannesburg Consolidated Investment Company, Limited, for the par value of the number of shares applied for, and must be deposited at, or reach, the office of the Johannesburg Consolidated Investment Company, Limited, Consolidated Building, Fox Street, Johannesburg, not later than 1 P.M. ON THURSDAY, the 21st MARCH, 1918, after which no applications will be received.

**Cheques on Banks outside of Johannesburg must include the cost of exchange.**

All applicants must be persons resident in the Union of South Africa.

The particulars of the Company are:

### CAPITAL.

£1,500,000, in 1,500,000 Shares of £1 each.

300,000 Shares fully paid up.

1,200,000 Shares 2/- paid up.

### DIRECTORS.

SOLOMON BARNATO JOEL, Esq., Director of Companies, 10 and 11, Austin Friars, London, E.C.

JOHN MUNRO, Esq., Director of Companies, and Representative in Johannesburg of Messrs. Barnato Bros., Consolidated Building, Fox Street, Johannesburg.

CHARLES MARX, Esq., Director of Companies, and Representative in Johannesburg of Messrs. Barnato Bros., Consolidated Building, Fox Street, Johannesburg.

PERCIVAL ROSS FRAMES, Esq., Director of Companies, Cullinan Building, Simmonds Street, Johannesburg.

GUSTAV IMROTH, Esq., Director of Companies, and Managing Director of Johannesburg Consolidated Investment Company, Limited, Consolidated Building, Fox Street, Johannesburg.

JAMES HUSKISSON CROSBY, Esq., Director of Companies, Consolidated Building, Fox Street, Johannesburg.

### SOLICITORS.

MESSRS. WEBBER, WENTZEL, SOLOMON AND FRIEL, City House, Harrison Street, Johannesburg.

### AUDITORS.

MESSRS. ALEX. AIKEN AND CARTER, Public Accountants, National Bank Buildings, Simmonds Street, Johannesburg.

MESSRS. E. DANCKWERTS AND CO., Public Accountants, Winchester House, Johannesburg.

### BANKERS.

THE AFRICAN BANKING CORPORATION, LIMITED.

### SECRETARIES.

THE JOHANNESBURG CONSOLIDATED INVESTMENT COMPANY, LIMITED, Consolidated Building, Fox Street, Johannesburg.

The principal object of the company is to acquire from Messrs. Barnato Bros. the sole and exclusive right to mine the precious metals under:

(1) The Farm De Sponz N. 15, in the Mining District of Boksburg, Transvaal Province, measuring 816 morgen, 251 square rods, and divided into 1,179 claim areas, Nos. 11179, extending as the Diagram framed by Land Surveyor F. J. Ortlepp in September, 1916, and approved by the Surveyor-General on the 15th January, 1917, under S. G. No. B 131/16, and filed in the Mining Titles Office under R. M. T. No. 3891, more fully describes; and

(2) The southern portion of the Farm Geduld No. 21, in the Mining District aforesaid, measuring 607 morgen, 161 square rods, and divided into 876 claim areas, Nos. 1114956, extending as the Diagram framed by Land Surveyor J. B. Tucker in August, 1916, and approved by the Surveyor-General on the 22nd December, 1916, under S. G. No. B. 121/16, and filed in the Mining Titles Office under R. M. T. 6353, more fully describes.

Messrs. Barnato Bros. acquired the said right to mine under a Deed of Lease entered into on the 8th February, 1915, between the Governor-General in Council and Messrs. Barnato Bros. It is provided in the Deed of Lease that Messrs. Barnato Bros. shall form and register a Company with a capital of £1,500,000, divided into 1,500,000 Shares of One Pound each, 300,000 of which shall be paid for in full, and 1,200,000 of which shall be paid for as to 2/- each within 15 days after the date of incorporation of the Company, and that the balance of 18/- on each of the said 1,200,000 Shares shall be paid as and when the Company may require, and that Messrs. Barnato Bros. shall, for a commission at the rate of 5 per cent. (being £75,000 in all), guarantee the subscription of the whole of the capital at par on the said terms, and that Messrs. Barnato Bros. shall cede the Deed of Lease to the Company free of consideration. In pursuance of these provisions the Company was incorporated on the 20th day of February, 1918.

An Agreement was entered into on the 26th day of February, 1918, by which Messrs. Barnato Bros. ceded to the Company free of consideration the benefits of the Deed of Lease, and guaranteed the subscription of the whole of the initial capital of the Company at par, on the terms abovementioned and in consideration of the payment of a commission at the rate of 5 per cent. (£75,000 in all) as aforesaid.

Copies of the Deed of Lease, and of the Agreement of the 26th day of February, 1918, may be inspected at the office of the Company on business days between the date of this advertisement and the 21st day of March, 1918, during business hours.

No Vendors', Guarantors' or Promoters' Shares have been or are to be created.

The Company was promoted by Messrs. Barnato Bros. (the members of which are Solomon Barnato Joel, a Director of the Company, and Jack Barnato Joel). The nature of their interest in the promotion of the Company, in the Deed of Lease, and in the Agreement of the 26th day of February, 1918, has been hereinbefore fully disclosed. The other Directors have no interest in the promotion of the Company, in the Deed of Lease, or in the Agreement of the 26th day of February, 1918.

The Company is to pay the cost, charges and expenses, preliminary and incidental to the acquisition of the said Deed of Lease, and the promotion, establishment and registration of the Company. The estimated amount thereof is £6,000.

The Articles of Association provide:

- That the qualification of a Director is to be the holding of One Hundred Shares in the Company.
- That the remuneration of each Director is to be the sum of £200 per annum and such further sum, to be divided equally between all the Directors in each year, as may, when added to the total of the fixed annual payments, be equal to 5 per cent. of the amount paid by the Company by way of dividend and the amount paid to the Government under the Lease as its share of the net produce in that year; Provided that the total remuneration in any one year shall not exceed £10,000 (ten thousand pounds).
- For the remuneration of a "Managing Director," a "Committee of Directors," and any Director called upon to perform extra services or to make any special exertions or otherwise for the purposes of the Company. Such remuneration is to be such as may be determined by the Board, and may be in addition to, or in substitution of, any Director's share in the remuneration of the Directors.

If the Shares offered are over applied for, Messrs. Barnato Bros. reserve free discretion as to the allocation thereof among the applicants. Where no allocation is made the deposit will



be returned in full, and where the number of shares allocated is less than the number applied for, the balance of the deposit will be returned.

Forms of Application can be obtained at the office of the Johannesburg Consolidated Investment Company, Limited, and at all branches of the African Banking Corporation, Limited, in the Union of South Africa.

Johannesburg, the 27th day of February, 1918.

THE JOHANNESBURG CONSOLIDATED INVESTMENT COMPANY, LIMITED,

FOR MESSRS. BARNATO BROS.

## FORM OF APPLICATION.

To the JOHANNESBURG CONSOLIDATED INVESTMENT COMPANY, LIMITED, Consolidated Building, Fox Street, Johannesburg, or P.O. Box 590, Johannesburg.

Gentlemen,—

In response to the advertisement of Messrs. Barnato Bros., dated the 27th day of February, 1918, I enclose herewith

Post Office Order }  
Draft } for the sum of £....., being a de-  
Cheque }

posit of £1 per Share on.....Shares in NEW STATE AREAS, LIMITED, out of the 150,000 Shares mentioned in the advertisement.

I hereby agree to purchase that number of shares or any smaller number (if any) which you may in your discretion allocate to me, on the terms mentioned in the advertisement.

I hereby declare that I am not an enemy subject within the Trading with the Enemy Act, 1916, and that I make this application for myself.

Name in full .....

Address .....

Date .....1918.

Signature .....

**NOTE.**—All applications for shares must reach the office of the Johannesburg Consolidated Investment Company, Limited, Consolidated Building, Fox Street, Johannesburg, not later than 1 p.m. ON THURSDAY, the 21st MARCH, 1918.

Cheques on Banks outside Johannesburg must include the cost of exchange.

The Bill introduced in the British House of Commons recently by Sir Albert Stanley, President of the Board of Trade, is intended to remedy certain imperfections in the Patents and Designs Act of 1907. The main purpose of the British patent laws is not only to promote the commercial development of inventions by giving the inventor a monopoly for a term of years, but also to ensure the publication of such a full account of all inventions that when the monopoly period expires anyone may be in a position to make of them what use he pleases. The Garton memorandum finds that the existing Act does not adequately fulfil these fundamental requirements. It is, it states, becoming increasingly common for patents to be obtained for the sole purpose of preventing development in the interests of an existing process. Moreover, it is complained that the fees require revision, being too high for the protection of minor inventions, and beyond the means of relatively poor men. It is claimed to be economically unsound to consider patent fees merely as a source of revenue, and also that it would be to the national advantage to devise some means whereby patentees of small means might obtain assistance in the commercial development of their inventions. The Dominions Royal Commission recently considered the matter from another standpoint, viz., the diversity of present practice as regards the protection of imported inventions. Sir Albert Stanley's Bill does not seek to cover so wide a ground as is indicated above. It

does not touch the question of fees, and is confined almost exclusively to securing adequate working in the United Kingdom on a commercial scale. There were various loopholes in the Act of 1907, which rendered almost nugatory the revocation of patents for non-working. The present Bill provides that the monopoly rights under a patent shall be deemed to be abused if, after the expiration of four years, the patented invention is not being worked within the United Kingdom on a commercial scale, and no satisfactory reason can be given for such non-working; if the working of the invention on a commercial scale is being prevented or hindered by the importation from abroad of the patented article by the patentee; if the demand for the article is not being met to an adequate extent and on reasonable terms; if, by reason of the refusal of the patentee to grant licences upon reasonable terms, the trade or industry of the United Kingdom or the establishment of any new trade or industry is prejudiced, and it is in the public interest that a licence or licences should be granted; and if any trade or industry is unfairly prejudiced by the conditions attached by the patentee to the purchase, hire, or use of the patented article, or to the using or working of the patented process. For the purpose of determining whether there has been any abuse of the monopoly rights, it is to be taken that patents for new inventions are granted not only to encourage invention, but also to secure that new inventions shall if possible be worked on a commercial scale in the United Kingdom without undue delay. Power is given to the Comptroller, in case of default, to issue a licence to petitioners to work a patent, to preclude the patentee from himself working or using the invention, and to secure to the patentee a maximum royalty compatible with the licensee working the invention on a commercial scale and at a reasonable profit. In granting licences of right the Comptroller is to endeavour to secure to the patentee the maximum advantage consistent with the invention being worked by the licensee at a reasonable profit, and endeavour to secure the widest possible use of the invention consistent with the patentee deriving a reasonable advantage from his patent rights. How far this Bill will remedy the defects of the existing Act will probably be more apparent when its clauses are discussed in Parliament. So far as can be judged it is aimed not so much at simplifying procedure within the Empire as at the removal of anomalies with regard to foreign inventions.

### The New Board of Trade Journal.

The first issue of the *Board of Trade Journal and Commercial Gazette* (sixpence weekly) in its altered form appeared on January 3rd. It contains a "foreword" by the President of the Board of Trade and in a series of special articles there is given a good deal of informative matter such as the industrial and trading community will doubtless welcome. It gives promise of being of considerable service in assisting traders and in encouraging trade development. The article on "After-War Trade: Reports of Departmental Committees" brings together the objects, personnel and work of these committees in a concise form, though still leaving our thirst for information respecting the detailed doings and conclusions of some of these committees unsatisfied for the present. In due course, however, even this want is to be supplied to some extent in a series of special articles which we naturally await with interest. A first article on "The Patents and Designs Bill," which came before the Commons in November last, describes the provisions and purpose of the measure, and it is to be followed by another explaining some of the clauses not covered in this opening contribution. The other contents of the *Journal* include a large collection of trade news, information collected from different parts of the world, Government notices affecting trade, and Customs' Regulations and Tariff changes such as readers of the old journal had long been accustomed to. No advertisements are to be accepted in future, an example which the Union Government's *Journal of Industries* might well follow.



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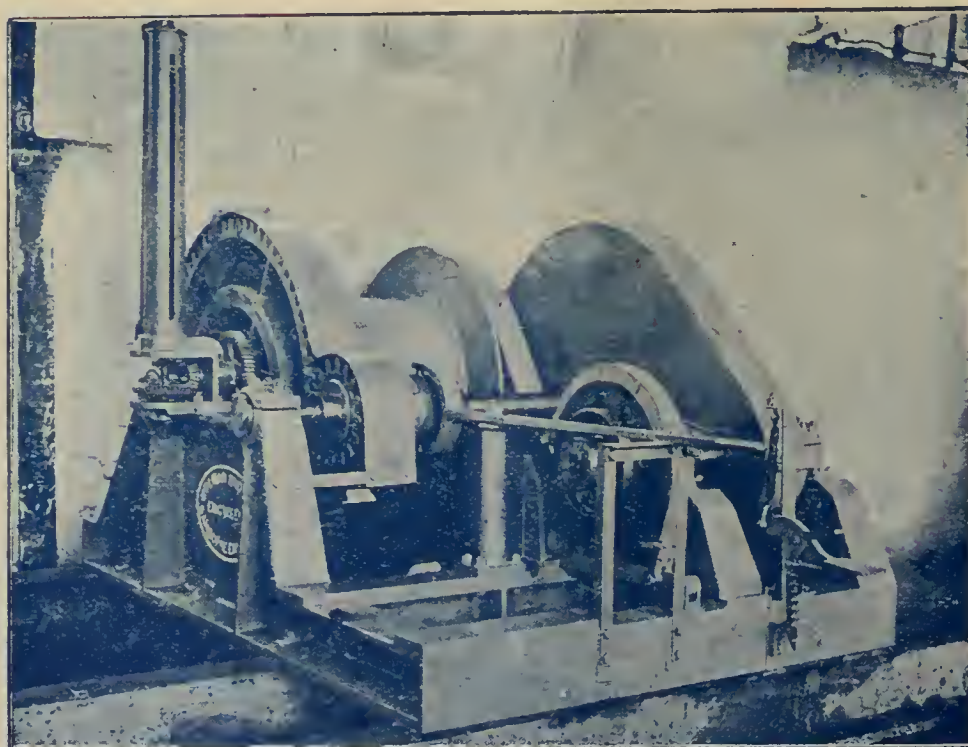
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